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EST 26-MAR-2002

ALIGNMENTS

RESULT 1 BQ007008/c LOCUS

DEFINITION

ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM REFERENCE AUTHORS TITLE

JOURNAL COMMENT

ON UI-H-EI1-azb-j-22-0-UI.sl NCI\_CGAP\_EI1 Homo sapiens cDNA clone
IMAGE:5846517 3', mRNA sequence.

BQ0077008
BQ0077008.1 GI:19731908
EST.
human.
SM Homo sapiens
ELKaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

E 1 (bases 1 to 722)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
NALIONAL Cancer Institute, Cancer Genome Anatomy Project (CGAP),
Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. Jose Mercuende
cDNA Library preparation: Dr. M. Bento Soares, University of Iowa
CNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Clone distribution information can be found
through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
The following repetitive elements were found in this cDNA
Sequence: 297-371, >(TAAA)n#Simple\_repeat
Seq primer: M13 FORWARD

FEATURES

Location/Qualifiers

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Email: segref
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Contact: Genoscope
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/lab_host="DH10B (Life Technologies)"

/note="Organ: Left Pelvis; Vector: pT7T3-Pac (Pharmacia)

/note="Organ: Left Pelvis; Vector: pT7T3-Pac (Pharmacia)

with a modified polylinker; Site_1: EcoR I; Site_2: Not I;

NCI_CGAP_EII is a normalized cDNA library containing the

following tissue(s): Chondrosarcoma. The library was

constructed according to Bonaldo, Lennon and Soares,

Genome Research, 6:791-806, 1996. First strand cDNA

synthesis was primed with an oligo-dT primer containing a

Not I site. Double stranded cDNA was ligated to an EcoR I

adaptor, digested with Not I, and cloned directionally

into pT7T3-Pac vector. The oligonucleotide used to prime

the synthesis of first-strand cDNA contains a library tag

sequence that is located between the Not I site and the

(dT)18 tail. The sequence tag for this library is
                                                                                                                                                                                                                                                                                                                                                                                                                                            mRNA
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91006 EVRY cedex - France
segref@genoscope.cns.fr, V
Location/Qualifiers
           /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="CS0DI002YE03"
/clone_lib="LTI_NFL006_PL2"
/tissue_type="placenta"
/note="Vector: pCMVSPORT 6; Site_1: NotI; 1s
was primed with a NotI-oligo(dT) primer. Fi
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TAG_SEQ=ACACTTGCAC"
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Initial Assessment of Human Gene Diversity and Expression Patterns Based Upon 83 Million Basepairs of cDNA Sequence

Nature 377, 3-174 (1995)

Contact: Venter, JC

The Institute for Genomic Research
932 Clopper Rd, Gaithersburg, MD 20878

Fmail: J018699423
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                                                                                                                                                            For clone availability, additional sequence and information related to this EST, please contact (tdbinfo@tdb.tigr.org)
Seq primer: M13 Reverse.
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Human Testis Homo sapiens cDNA 5'
factor, alpha (HT:1190), mRNA sequ
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                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eutheria; Primates; Catarrhini; Hominidae; Homo.
/db_xref="ATCC (inhost):107667"
/db_xref="taxon:9606"
/clone_lib="Human Testis"
/note="Organ: testis"
                                                                                            ′organism="Homo
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Seq pri
High qu
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National Cancer Institute, Cancer Genome Anatomy Program Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
This clone is available royalty-free through LLNL;
IMAGE Consortium (info@image.llnl.gov) for further
Insert Length: 1280 Std Error: 0.00
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Mammalia; E
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AI242177

Gh81g08.x1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens clone IMAGE:1851134 3' similar to gb:M10988 TUMOR NECROSIS PRECURSOR (HUMAN);, mRNA sequence.
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ATCTGGAGACCAGGGAGCCTTTGGTTCTGGCCAGAATGCTGC 104
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                                                                                                                                                                                                  double-stranded cDNA was ligated to Eco RI adapted (Pharmacia), digested with Pac I and cloned into and Eco RI sites of the modified pT7T3 vector. went through one round of normalization. Library constructed by Bento Soares and M.Fatima Bonald 130 c 135 g 137 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eutheria;
                                                                                                                                                                                                                                                                                                                              'organism="Homo sapiens"
'db_xref="taxon:9606"
'clone="IMAGE:1851134"
'clone_lib="Soares_fetal_liver_spleen_1NFLS.
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Pred. No. 9.3e-17;
Mismatches 10
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human.
Homo sapiens
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High quality
AL575811 660
AL575811 LTI_NFL006_PL2 Homo
prime, mRNA sequence.
AL575811 GI:12937341
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: M. Bento Soares, Ph.D.
cDNA Library Preparation: M. Bento Soares, Ph.D. and M.Fatima
Bonaldo, Ph.D.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
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NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.National Cancer Institute, Cancer Genome Anat Tumor Gene Index
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    found through the I.M.A.G.E. info@image.llnl.gov
Seq primer: -40UP from Gibco
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Hillier, L., Allen, M., Bowles, L., D Krizman, D., Kucaba, T., Lacy, M., Le, J., Moore, B., Schellenberg, K., St White, Y., Wylie, T., Waterston, R. a WashU-NCI human EST Project Unpublished (1997)

Contact: Wilson RK
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human.
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Full-length cDNA libraries and
Unpublished (2001)
Contact: Genoscope
Genoscope - Centre National de
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EST.
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                            Washington University School of Med 4444 Forest Park Parkway, Box 8501, Tel: 314 286 1800 Fax: 314 286 1810
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Zi78f12.sl Soares_fetal_liver_spleen_lNFLS_S1 Homo sapiens clone IMAGE:446927 3' similar to gb:M10988 TUMOR NECROSIS I PRECURSOR (HUMAN);, mRNA sequence.

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 clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="CS0DI070YO15"
/clone="LTI_NFL006_PL2"
/tissue_type="placenta"
/note="Vector: pCMVSPORT 6; Site_1: Not1; 1st strand cDNA
was primed with a Not1-oligo(dT) primer. Five prime end
enriched, double-stranded cDNA was digested with Not I and
cloned into the Not I and Eco RV sites of the pCMVSPORT 6
vector. Library was normalized. Library was constructed by
Life Technologies. Contact: Feng Liang Life Technologies,
a division of Invitrogen 9800 Medical Center Drive
Rockville, Maryland 20850, USA Fax: (1) 301 610 8371
Email: fliang@lifetech.com URL:
http://fulllength.invitrogen.com"
51 a 90 c 103 g 158 t 58 others
est@watson.wustl.edu
one is available roy
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Primates;
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royalty-
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Catarrhini;
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Catarrhini;
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                                                                                 Medicine
                                                                                                                                             , Dubuque,T., Geisel,G., Jost,S.,
Le,N., Lennon,G., Marra,M., Martin
Steptoe,M., Tan,F., Theising,B.,
. and Wilson,R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Web : www.genoscope.cns.fr.
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AUTHORS
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AA207062/
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                                                                                                                                                                                                                                                                                                                                                                                                                          તે
                                                                                                            **Cobert Strausberg, Pl
...all: cgapbs-r@mail.nih.gov
This clone is available roval

IMAGE Consortium (info
Seq primer: -400
High qual
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similar to
sequence
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Tumor Gene Index
Unpublished (1997)
Contact: Robert Str
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Seq primer: -40ml
High quality sequ
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Eukaryota; M
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1 (bases 1 to 562)
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Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /dev_stage="20 week-post conception fetus"
/lab_host="DH10B (ampicillin resistant)"
/note="Organ: Liver and Spleen; Vector: pT7T3D (Pharmacia)
with a modified polylinker; Site_1: Pac I; Site_2: Eco RI;
This is a subtracted version of the original Soares fetal
liver spleen lNFLS library. 1st strand cDNA was primed
with a Pac I - oligo(dT) primer [5'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sortium (info@image.llnl.gov) for r: -40ml3 fwd. ET from Amersham ity sequence stop: 397.
Location/Qualifiers
                                      /db_xref="GDB:5585957
/db_xref="taxon:9606"
/clone="IMAGE:682637"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="taxon:9606"
/clone="IMAGE:446927"
/clone_lib="Soares_fetal_liver_spleen_lNFLS.
                          /clone_lib="NCI_CGAP_GCB1"
                                                                              organism="Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'organism="Homo sapiens
'db_xref="GDB:1351184"
tissue_type="germinal/
lab_host="DH10B"
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                                                                                                                                                                                                                                                                                     Metazoa;
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                                                                                                                                  is available royalty-free trtium (info@image.llnl.gov)
-40Ml3 fwd. from Amersham
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85.1%;
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Primates;
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                                                                 mo sapiens"
:5585957"
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               center
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                B
                cell"
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Seq primer:
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AA824594.1
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                                                                                                                                                             High
                                                                                                                                                                                   DNA Sequencing by: Washington University Genome Clone distribution: NCI-CGAP clone distribution found through the I.M.A.G.E. Consortium/LLNL at: www-bio.llnl.gov/bbrp/image/image.html
Insert Length: 614 Std Error: 0.00
                                                                                                                                                                                                                                                                                                     Contact: Robert Strausberg, Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Louis M.
                                                                                                                                                                                                                                                                                                                                            Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                        NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap
National Cancer Institute, Cancer Genome Anal
Tumor Gene Index
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                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                 Ph.D., Gerald Marti, M.D. CDNA Library Preparation: M. Sonaldo, Ph.D.
                                                                                                                                                                                                                                                   cDNA Library Arrayed by: Greg Lennon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCCAGAATGCTGC
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Location/Qualifiers
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                                                    /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:1356309"
/clone_lib="NCI_CGAP_GCB1"
/tissue_type="germinal center)
/lab_host="DH10B"
   was prepared from germinal center B
                            /note="Vector: pT7T3D-Pac
polylinker; Site_1: Not I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 546 bp mRNA linear EST 18-MAR NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1356309 gb:M10988 TUMOR NECROSIS FACTOR PRECURSOR (HUMAN);,
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Primates;
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cells
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Catarrhini;
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ac (Pharmacia) with a modified I; Site_2: Eco RI; 1st strand tonsillar cells enriched for by flow sorting (CD20+, IgD-).
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N HS-1047-B2-G12-MF.abi CIT Human Genomic Sperm Library
sapiens genomic clone Plate=CT 830 Col=24 Row=N, DNA s
B38591.1 GI:2542843
GSS.
human.

M Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eu
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; H
1 (bases 1 to 136)
M Homo sapiens
I (bases 1 to 136)
M Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eu
Manmalia; Eutheria; Primates; Catarrhini; Hominidae; H
1 (bases 1 to 136)
M Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eu
Manmalia; Eutheria; Primates; Catarrhini; Hominidae; H
1 (bases 1 to 136)
M Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eu
Manmalia; Eutheria; Primates; Catarrhini; Hominidae; H
1 (bases 1 to 136)

Equipmentia; Eutheria; Primates; Catarrhini; Hominidae; H
1 (bases 1 to 136)

Construction of a Characterized Clone Resource for Gen
Sequencing: Generation and Preliminary Analysis of 20,
Tagged Connectors
Unpublished (1997)
Contact: Mahairas GG, Zackrone KD, Hood L
University of Washington
Seattle, WA 98195, USA
Tel: (206) 616-8744
Fax: (206) 616-8744
Fax: (206) 685-7301
Email: kzackron@u.washington.edu
Sequence Tagged Connector
Plate: CT 830 row: N column: 24
Class: BAC ends
High quality sequence stop: 136.
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53; Conservative
                                                                    similarity 62.
4; Conservative
TTGATCCCGAACATCTGGAATCCGGAGACCCCACGAGCCTTTGGTTCTGCCCAGATTGCTG
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Location/Qualifiers
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E-Coli DH10B"
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/db_xref="taxon:9606"
/clone="Plate=CT 830 Col=24 Row=N"
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124 g 135 t
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Pred. No.
                                                                 Score 34.8; DB 17; Pred. No. 0.73; ); Mismatches 33;
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Genomic
20,000 Sequence
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AL110410/c
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SOURCE
                                                                                                                 RESULT 12
BQ232100/c
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Best Local
Matches 5
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DKFZP434K0131_r1 ',

DKFZP434K0131 5',

AL110410

AL110410.1 GI:58(

EST.
Homo sapiens
Eukaryota; Me
Mammalia; Eut
                                                             BQ232100
AGENCOURT_7
5', mRNA se
BQ232100
BQ232100.1
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Similarity 58.9%;
56; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Am Klopferspitz 18a D-82152 Martinsried, Germany This is the 5' sequence of the clone insert Clone from S. Wiemann, Molecular Genome Analysis, German Research Center (DKFZ); Email s.wiemann@dkfz-heidelberg.sequenced by LMU (Ludwig Maximilians University, Munich/Germany) within the cDNA sequencing consortium of Genome Project.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No s1 sequence available.
This clone (DKFZp434K0131) is available at the RZPD in Please contact the RZPD: Ressourcenzentrum, Heubnerweg Berlin-Charlottenburg, GERMANY; Email: clone@rzpd.de. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MIPS
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                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="DKFZp434K0131"
/clone_lib="434 (synonym: h
/tissue_type="testis"
/dev_stage="adult"
/lab_host="DH108"
/note="Vector: pSport1; Sit
a 192 c 168 g 175 t
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                                                                                                                                         s (bases 1 to 342)
S Bonaldo, M.F., Lennon, G. and Soares, M.B.
Normalization and subtraction: two approaches to discovery
Genome Res. 6 (9), 791-806 (1996)
97044477
Contact: Soares
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: ATCC

cDNA Library Preparation: Life Technologies, Inc.

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Agencourt Bioscience Corporation

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

Plate: LLAM13347 row: p column: 01
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                                                                                                                                     Program
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ail: msoares@blue.weeg.uiowa.edu
e sequence contained an oligo-dT track that was present in
igonucleotide that was used to prime the synthesis of first
rand cDNA and therefore this may represent a bonafide poly
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ttus norv
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-R-BJ2-bqt-c-05-0-UI.sl UI-R-BJ2 Rattus
-R-BJ2-bqt-c-05-0-UI 3', mRNA sequence.
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Ogram for Rat Gene Discovery and Mapping
Eversity of Iowa
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                                                                   Eckstein Medical Research Building Iowa City, : 319 335 8250
: 319 335 9565
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/db_xref="taxon:9606"
/clone="IMAGE:6067824"
/clone_lib="NIH_MGC_92"
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/lab_host="DH10B (phage-resistant)"
/note="Organ: testis; Vector: pCMV-SPORT6; Si
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RESULT 14
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TITLE
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BP 191 91006 EVKY CEUCA
- Web: www.genoscope.cns.fr)
Determination of this BAC-end sequence was carried out as part collaboration with the Berkeley Drosophila Genome Project (BDG The BDGP is constructing a physical map of the Drosophila melanogaster genome using these BACs. For further information please see http://www.fruitfly.org The BDGP Drosophila melanogaster BAC library was prepared by Kazutoyo Osoegawa and Mammoser in Pieter de Jong's laboratory in the Department
                                                                                                                                                                                   Genoscope.

Direct Submission
Submitted (02-JUN-1999) Genoscope
BP 191 91006 EVRY cedex - FRANCE (
                                                                                                                                                                                                                                                                                                                                                                                                                                             Drosophila melanogaster genome survey sequence T7 end of BAC:
BACR37K10 of RPCI-98 library from Drosophila melanogaster (fruit fly), genomic survey sequence.
AL075400
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                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Arthropoda; Hexapoda; Inse
Neoptera; Endopterygota; Diptera; Brachycera;
Ephydroidea; Drosophilidae; Drosophila.
1 (bases 1 to 876)
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Drosophila melanogaster
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/lab_host="DH10B (Life Technologies)"
/note="Vector: pT7T3D-Pac (Pharmacia) with a modified
/note="Vector: pT7T3D-Pac (Pharmacia) with a modified
polylinker; Site_1: Not I; Site_2: Eco RI; The UI-R-BJ2
library is a subtracted library derived from the following
tissues: heart, atrium at 15 dpc, ventricle at 16.5 dpc,
atrium at 16.5 dpc, ventricle at 13 dpc, ventricle at 15
dpc, AV canal at 15 dpc. For a detailed description of
the library from which this clone was derived, please
visit our web site at ratest.eng.uiowa.edu. The
subtraction has been previously described in (Bonaldo,
Lennon and Soares, Genome Research 6:791-806, 1996)
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TAG_LIB-UI-R-BJ2
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TAG_SEQ=ACAAC"
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/db_xref="taxon:10116"
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segref@genoscope.cns.fr
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S Akimura, T., Arakawa, T., Carninci, P., Furuno, M., Hanagaki, T.,

S Akimura, T., Arakawa, T., Carninci, P., Furuno, M., Hanagaki, T.,

Hayatsu, N., Hiramoto, K., Hiraoka, T., Hirozane, T., Imotani, K., Ishii

Y., Ito, M., Kawai, J., Kojima, Y., Konno, H., Kouda, M., Matsuyama, T.,

Nakamura, M., Nishi, K., Nomura, Y., Konno, H., Kouda, M., Matsuyama, T.,

Saito, R., Sakai, C., Sakai, K., Sakazume, N., Sasaki, D., Sato, K.,

Saito, R., Sakai, K., Sakai, K., Sakazume, N., Sasaki, D., Sato, K.,

Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Suzuki, H., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Tanaka, T., Tomaru, A., Toya, T.,

Watahiki, A., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y.,

RIKEN Encyclopedia of Mouse Full-length cDNAs (Akimura, T., et al. 2001)

Contact: Yoshihide Hayashizaki

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1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan Tel: 81-45-503-9222

Fax: 81-45-503-9216
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house mouse.
Mus musculus
Eukaryota; M
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                      Email: genome-res@gsc.riken.go.jp/
URL:http://genome.gsc.riken.go.jp/
Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., I
,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.

Normalization and subtraction of cap-trapper-selected cDNAs to
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wagi,K., Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E.,
Watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsu,S., Kawai,J., Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and
,S., Kawai,J.,
Hayashizaki,Y.
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/db_xref="taxon:7227"
/clone="BACR37K10"
/clone_lib="RPCI-98"
/note="end : T7"
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Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
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                                                                                                                                                                                                                                                                                                                   Similarity 57. 55; Conservative
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further details.
e mouse tissues
                                                                                                     GAGACCAGGAGCCTTTGGTTCTGGCCAGAATGCTG 103
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/dev_stage="12 days embryo"
/note="Vector: pSPORT1; Site_1: Sall; Site_2: NotI; This clone is among a rearrayed set of 15,247 clones from 11 embryo cDNA libraries (including preimplantation stage embryos from unfertilized egg to blastocyst, embryonic part of E7.5 embryos, extraembryonic part of E7.5 embryos, extraembryonic part of E7.5 embryos, and E12.5 female mesonephros/gonad) and one newborn ovary cDNA library. Average insert size 1.5 kb. All source libraries are cloned unidirectionally with Oligo(dT)-Not primers. References include: (1) Genome-wide expression profiling of mid-gestation placenta and embryo using a 15,000 mouse developmental cDNA microarray, 2000, Proc. Natl. Acad. Sci. U S A, 97: 9127-9132; (2)
Large-scale cDNA analysis reveals phased gene expression patterns during preimplantation mouse develolpment, 2000, Development, 127: 1737-1749; (3) Genome-wide mapping of unselected transcripts from extraembryonic tissue of 7.5-day mouse embryos reveals enrichment in the t-complex and under-representation on the X chromosome, 1998, Hum Mol Genet 7: 1967-1978."
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## ALIGNMENTS

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Cis-acting RNA-active tumour need
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                                                                                                                           ting sequence; intron removal; trans-acting factor; alpha-subunit; tivated protein kinase; eukaryotic initiation factor 2; eIF2alpha; necrosis factor alpha; TNF-alpha; gene therapy; ss.
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Regulation

of gene expression by mRNA splicing is carried out using

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C 3'UTR (untranslated region). Chimeric nucleotides (AAZ20983, 220984)
C were constructed comprising at least one TNFalpha promoter enhancer
region (AAZ20975-Z20978), a TNFalpha promoter (AAZ20972-Z20974), a DNA
C encoding the apoptosis-inducing Granzyme B protein (AAZ20982), and a
C TNFalpha 3'UTR sequence. TNFalpha is one of a number of
C cytokines produced by inflammatory cells. Upregulation and/or
C dysregulation of cytokines in inflamed tissue may be directly or
indirectly responsible for exacerbation of chronic inflammatory
diseases. Introduction of the chimeric nucleotide to activated
inflammatory cells causes them to undergo apoptosis. Pharmaceutical
c compositions of the chimeric nucleotide may be useful for treating
inflammatory disorders such as multiple sclerosis, Crohn's disease,
c ulcerative colitis, psoriasis, graft versus host disease, lupus
erythematosus, insulin-dependent (type I) diabetes mellitus, ankylosing
spondylitis, and in particular, rheumatoid arthritis. The use of such
chimeric nucleotides offers simpler and cheaper long-term relief, in
comparison with existing conventional pharmaceutical and invasive surgery
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                                                                                                                                                                                                                                                                                                        r; anticancer;
                                                                                                                                                                                                                                                                                                                                                                                                                   standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAATCTGGAGACCAGGGAGCCTTTGGTTCTGGCCAGAATGCTGC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 104; DB 20; larity 100.0%; Pred. No. 2.1e-25; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                      LS,
                                              CORP.
                                                                    85US-0698939.
82US-0435154.
83US-0486162.
83US-0564224.
84US-0661026.
85US-0695934.
                                                                                                                                                           86WO-US00236
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                       SDY,
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                                                                                                                                                                                                                                                                                                                                             human tumour
                       Wang AM;
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                                                                                                                                                                                                                                                                                                                                             necrosis
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Matches 10
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05-JUL-1984;
05-JUL-1984;
05-JUL-1984;
03-DEC-1984;
03-DEC-1984;
25-JUL-1984;
03-DEC-1984;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The sequence encoding TNF produced by the promyelocytic leukemia cell line (HL-60, ATCC no.CCL240) has been cloned and expressed in E.coli (see AAN60557). Neither of the cysteine residues (69 and 10 the TNF sequence appears to be involved in disulphide linkages. The patentors claim a novel synthetic mutein of a biologically active hTNF protein, having at least one cysteine residue free from a disulphide link and non-essential to the activity and having at least one of the cysteine residues deleted or replaced by another Plasmid pAW731 (Ser 69) is claimed.
                               (GETH
                                                                                                                                                                                                                   03-JUL-1985
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Similarity 100.0%;
04; Conservative
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84US-0627959.

84US-0628059.

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84US-0677257.

84US-0627969.

84US-0677267.
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Pred. No. 2.4
; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 190
P-PSDB;
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                                                                                                                                                                                                                                     EAST CAROLINA
J W.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the pure human tumour necrosis factor, mutants of d by the claims. TNF and mutants are useful in , especially in tandem with interferon. The e may be used to create plasmid pTrpXAPTNF, allowing f an E.coli host for the expression of TNF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                antisense oligonucleotide related sequence
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Low adenosine (A) content antisense oligonucleotides which trigger adenosine receptors during metabolism, useful e.g. cancers and respiratory obstructions -

for tre

Disclosure;

Page

887;

1592pp;

English.

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RESULT 6
AAA34963
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense oligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antiinfiammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with lung/respiratory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines endogenously produced specific and non-specific enzymes, binding proteins, adhesion molecules and their receptors, cytokine and chemokines receptors, adhensine receptors, bradykinin receptors, cytokine and receptors, colonkine and peripheral nervous and non-nervous system peptide transmitters, defensins, growth factors, vasoactive peptides and receptors, CNS and peripheral nervous and non-nervous system peptide antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or bronchoconstriction) and/or lung inflammation, allergy(ies) and/or bronchoconstriction) and/or lung inflammation, allergy(ies) and/or system impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary bypertension, emphysema, chronic obstructive pulmonary disease (COPD), pulmonary targetion, bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polynucleotide of the present invention of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 104
                                                                                                                                                                                                                                                                  antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                             phosphorothioate; allergic disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human adenosine receptor related polynucleotide
                                                                                                                                                     WO200009525-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAA34963 standard;
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                                                                                        24-FEB-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               present invention.
                                                                                                                                                                                                                sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                       adenosine receptor; low adenosine antisense of prothioate; impaired respiration; inflammation; ic disease; bronchoconstriction; inhibitor; anticonstriction; anticonstriction; inhibitor; anticonstriction; inhibitor; anticonstriction; ant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAATTCAAACTGGGGCCTCCAGAACTCACTGGGGCCTACAGCTTTGATCCCTGACATCTG
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larity 100.0%;
Conservative 0
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                          99WO-US17712
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 104; DB 21; Pred. No. 2.4e-25; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antisense oligonucleotide;
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                                                                                                                                                                                                                                                                                                                                                                                                                           ion; allergy;
antiinflammatory;
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RESULT 7
AAN80219
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FH Key
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 104
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bronchitis,
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                                                                    Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstriction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                     Lymphokine; antitumour;
                                                                                                                                       Sequence
                                                                                                                                                                        28-DEC-19
                                                                                                                                                                                                          AAN80219;
                                                                                                                                                                                                                                           AAN80219
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ammation. The ON can have antiinflammatory, antiallergic, asthmatic, cytostatic and analgesic activities. The compositions are ul for the treatment of diseases associated with inflammation, ired airways, including lung disease and diseases whose secondary ects afflict the lungs of a subject. They can be used for treating ischaemic conditions, pulmonary vasoconstriction, allergies, ma, impeded respiration, respiratory distress syndrome, pain, cystic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JW;
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                                                                                                                                      of pE4 encoding human tumour
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                                                                                                                                                                                                                                                                                                                                                GAATCTGGAGACCAGGGAGCCTTTGGTTCTGGCCAGAATGCTGC 104
                                                                                                                                                                                                                                                                                                                                                                                                   GAATTCAAACTGGGGCCTCCAGAACTCACTGGGGCCTACAGCTTTGATCCCTGACATCTG
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                                                                                                                                                                                                                                             standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the sequence listing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              oligonucleotide (ON) with low adenosine (up to 15%), verbeic acids involved in bronchoconstriction, allergies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            205971/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Page 814-815; 1343pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 104; DB.21; larity 100.0%; Pred. No. 2.4e-25; Conservative 0; Mismatches 0;
                                                                                                                                                                         (first entry)
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                Location/Qualifiers 86..313
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                                                                                                                                                                                                                                             DNA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       308 G; 331 T;
                                                                                                                                         necrosis
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RESULT 8
AAN60557
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AC AAN6
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CS Home
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Best Local S
Matches 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A human TNF protein which is modified from the sequence shown in AAP80728, including naturally ocurring allelic variants is claimed. Also claimed are: recombinant DNA sequences encoding the protein (AAN80219) and control sequences for expression; a vector; a transformed host cell; a method of producing the protein by culturing the host cell; pharmaceutical compsn. of the protein and a carrier and a method of treating tumour burden with the compsn. The muteins are capable of the range of biological activities exhibited by native TNF but exhibit improved stability and ease of purification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 19
                                                                                                                                                                      Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human tumour necrosis factor having comparable biological and ease of purification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mark
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                                                                                                                                                                                                   Antitumour;
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                                                                                           mat_peptide
                                                                                                                                                                                                                                  Sequence
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                 14-AUG-1986
                                                WO8604606-A
                                                                                                                                                                                                                                                               28-JUL-1991
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)B; AAP80728.
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Similarity 100.0%;
04; Conservative
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                                                                                                                                                                                                                              encoding mature human
                                                                                                                                                                                                                                                                                                                           standard;
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RESULT 9
AAN60446
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Best Local S
Matches 104
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19-OCT-1982;
15-APR-1983;
20-DEC-1983;
15-OCT-1984;
07-FEB-1985;
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P-PSDB; A
09-OCT-19
21-DEC-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The sequence encoding TNF produced by the promyelocytic leukemia cell line (HL-60, ATCC no.CCL240) has been cloned and expressed in E.coli (see AAN60557). Neither of the cysteine residues (69 and 10 the TNF sequence appears to be involved in disulphide linkages. The patentors claim a novel synthetic mutein of a biologically active hTNF protein, having at least one cysteine residue free from a disulphide link and non-essential to the activity and having at least one of the cysteine residues deleted or replaced by another plasmid pAW731 (Ser 69) is claimed.
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984;
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82US-0435154.
83US-0486162.
83US-0564224.
84US-0661026.
85US-0695934.
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158..859
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5US-0785847.
4US-0684595.
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Pred. No. 2.5e-25;
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RESULT 10
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ID AAT15424
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Best Local S
Matches 104
                 20-DEC-1985;
21-DEC-1984;
09-OCT-1985;
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of host cel
for a mamma
expression
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P-PSDB; A/
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(FIER/)
(ALLE/)
(BIOG-)
                                                                                mat_peptide
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                                                    30-JAN-1996
                                                                US5487984-A
                                                                                            sig_peptide
                                                                                                                                     antitumour;
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                                                                                                                                                      Human
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VanDerHeyden
                                         21 - DEC
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                                                                                                                                                                                                                                                                                                  ike polypeptides and compsns. are produced by the fest cells transformed with at least one DNA sequence mammalian TNF-like polypeptide operatively linked tession control sequence in the transformed host.
                                                                                                                                                      tumour
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104; Conservative 0
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                                         -1984;
                                                                                                                                          necrosis
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AAP60531.
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FIERS W'O
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en J, Allet
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84US-0684595.
85US-0785847.
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158..859
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158..385
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386..856
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                                                                                                                                     TNF; phage T4
antimalarial;
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3, Washima EH;
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Pred. No. 2.5
); Mismatches
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No. 2.5e-25;
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AAT31021
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Best Local Si
Matches 104;
expressing by ischaen
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P-PSDB; A/
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P-PSDB; AJ
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TNF un
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CDS
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           Chimeric
                                              Bishopric
                                                                     23-DEC-19
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                                                                                                                                                                                 26-SEP-
                                                                                                                                                                                             AAT31021;
                                        Webster
                                                                                13 - NOV - 1·9
                                                                                                       WO9620276
                                                                                                                                                                      Human
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A cDNA clone (AAT15424), p-hTNF-1 (DSM 3160), codes for the human tumour necrosis factor (hTNF) precursor (AAR88590). It was obtd. by screening a human cDNA library with a fragment of mouse TNF cDNA. The isolated cDNA may be linked to expression control sequences from phage T4 or phage lambda (see AAT15402-05 and AAT15425-26) for expression in host cells, esp. Escherichia coli, and commercial-scale prodn. of recombinant TNF of use as an antitumour, anticancer and antimalarial agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gene therapy; hypoxia related enhancer reperfusion; promoter; tumour necrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tumour necrosis factor cDNA clone HSTNFR.
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AW00454.
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                                                                                                                                                                     Green CJ,
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153..854
/*tag= a
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factor; TNF; d
                                                                                                                                                                     Murphy B;
                       HREE - partic
tissue injury
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RESULT 12
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Best Local S
Matches 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TNF; apoptosis; ds; tumour; death domain receptor ligand; diterpenoid triepoxide; cytostatic activity; c-IAP2; c-IAP1; carcinoma; mammary adenocarcinoma; non-small cell lung carcinoma; neurological malignancy; haematological malignancy; lichen planus; non-Hodgkin's lymphoma; chronic lymphocytic leukaemia; anti-angiogenic; malignant cutaneous T-cell; lymphomatoid papulosis; anti-metastatic; non-MF cutaneous T-cell lymphoma; mycosis fungoides; anti-tumour; T-cell rich cutaneous lymphoid hyperplasia; bullous pemphigoid; discoid lupus erythematosus; human; gene; tumour necrosis factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A PCR-generated DNA fragment (AAT31021) encoding human tumour necrosis factor (hTNF) (AAW00454). hTNF induces apoptosis and is not known to be induced by hypoxic stress. A -90 bp human metallothionein IIA promoter fragment (see also AAT31003) was inserted upstream of the hTNF gene and the construct was used to transfect mouse C2C12 myoblasts and A431 cells. Hypoxiamediated TNF induction and tumour control were demonstrated in an animal xenograft model.
                   Use of a synergistic conditerpenoid triepoxides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo
                                                                                    WPI; 2002-121125/1
P-PSDB; AAU75065.
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20-AUG-1999;
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                                                                                                                                                                                                                                                                                                                  -FEB-2000;
                                         of
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                                                                                                                                                         gp,
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104; Conser
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
larity 100.0%;
Conservative
                                                                                                                                                                                                      LELAND
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BP; 370 A;
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99US-149989P
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
153..854
/*tag= a
/product= "TNF alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100-101;
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                                                                                                                                                                                                      STANFORD
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                    combination les for kill
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1643
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                   killing
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                English
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                   death domain of tumour ce
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                   in receptor cells -
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RESULT 13
AAZ20983
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This invention relates to a novel method for enhanced killing of tumour cells comprising contacting a tumour cell with a synergistic combination of a death domain receptor ligand and a diterpenoid triepoxide. This method has cytostatic activity and works by blocking invention may be used for treating tumours, particularly solid tumours, e.g. carcinoma, mammary adenocarcinoma and non-small cell lung carcinoma calso neurological malignancies, haematological malignancies, e.g. con-Hodgkin's lymphoma, chronic lymphocytic leukaemia, malignant cutaneous T-cells, mycosis fungoides, non-MF cutaneous T-cell lymphoma, chronic lymphocytic leukaemia, malignant combination may be administered with other active agents, e.g. anti-combination may be administered with other active agents, e.g. anti-combination may be administered with other active agents, e.g. anti-combination, anti-tumour or anti-angiogenic agents. The potent synergy between the diterpenoids and the death domain ligands allows increased killing at equivalent or lower doses, and can sensitise otherwise resistant cells. This sequence represents the human tumour necrosis of factor alpha (TNF alpha) DNA. TNF alpha is a ligand for death combination with diterpenoid triepoxides to kill tumours by induction of apportories.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 104
                                                                                                                                                                                                                                                                                                            psoriasis;
diabetes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   domain recept combination induction of
                                                                                                                                                                                                                                                                                                                                          TNFalpha; chimeric;
                                                                                         3'UTR
                                                                                                                                                      CDS
                                                                                                                                                                                                                               Key
                                                                                                                                                                                                                                                                Homo
                                                                                                                                                                                                                                                                                                                                                                                         Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                             WO9943840
                                                                                                                                                                                                                  promoter
                                                                                                                                                                                                                                                                              Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                      30-NOV-19
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                                                                                                                                                                                                                                                             sapiens.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAATCTGGAGACCAGGGAGCCTTTGGTTCTGGCCAGAATGCTGC 104
                            -A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1643
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           imilarity
                                                                                                                                                                                                                                                                                                                                                                                        nucleic acid -706TNFpGB3'UTR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAATTCAAACTGGGGCCTCCAGAACTCACTGGGGCCTACAGCTTTGATCCCTGACATCTG
                                                                                                                                                                                                                                                                                                         tumour necrosis factor alpha; apoptosis; inflammation; multiple sclerosis; Crohn's disease; ulcerative colitis; graft versus host disease; lupus erythematosus; ankylosing spondylitis; rheumatoid arthritis; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of apoptosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Column 27-30; 20pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 104; DB 24; larity 100.0%; Pred. No. 2.5e-25; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BP; 370 A; 495 C;
                                                                        1490..2264
/*tag= c
                                                                                                                                                    740..1477
                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                 /label= TNFalk
/note= "Human
                                                                                                                                  /*tag=
                                                          'label- TNFalpha_3'UTR
                                                                                                     'product= "Truncated Granzyme B"
'note= "Inactivating dipeptide a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA; 2270 BP.
                                                                                                                                                               TNFalpha_promoter
'Human TNFalpha native promoter (AAZ20973)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     398 G;
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                                                                                                          absent"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 1643;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1173
                                                                                                                                                                                                                                                                                                             promoter; ds.
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02-SEP-1999.

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RESULT 14
AAZ20984
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            comprises at least one TNFalpha (tumour necrosis factor alpha) promoter (enhancer region (AAZ20975-Z20978), a TNFalpha native promoter (AAZ20973), a DNA encoding a truncated form of the apoptosis-inducing Granzyme B protein (AAZ20982), and a TNFalpha 3'UTR (untranslated region) sequence (AAZ20979). TNFalpha is one of a number of cytokines produced by inflammatory cells. Upregulation and/or dysregulation of cytokines in inflammatory cells. Upregulation and/or dysregulation of cytokines in inflammatory cells cresponsible for exacerbation of chronic inflammatory diseases. Introduction of this chimeric nucleotide to activated inflammatory cells causes them to undergo apoptosis. Pharmaceutical compositions of this chimeric nucleotide may be useful for treating inflammatory disorders such as multiple sclerosis, Crohn's disease, ulcerative colitis, psoriasis, graft versus host disease, lupus erythematosus, insulin-dependent (type I) diabetes mellitus, ankylosing spondylitis, and in particular, rheumatoid arthritis. The use of such chimeric nucleotides offers simpler and cheaper long-term relief, in comparison with existing conventional pharmaceutical and invasive surgery methods.
                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 104
                                                                             Homo
                                                                                                              TNFalpha; tumour necrosis factor alpha; chimeric; multiple sclerosis; Crohn's d psoriasis; graft versus host disease; l diabetes; ankylosing spondylitis; rheum
                                                                                                                                                                                 Chimeric nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim
                                        promoter
                                                                                          Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
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                                                                                                                                                                                                                                                            AAZ20984
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27-FEB-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              chimeric
                                                                                                                                                                                                                                                                                                                                                                         1705
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                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; 100.0%; 104; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fig
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                                                                                                                                                                                                        (first
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            7..1033
/*tag=
/label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 apoptosis-inducing
                                       Location/Qualifiers 7..1033
                                                                                                                                                                               acid -1005TNFpGB3'UTR.
  /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            556
                                                                                                                                                                                                                                                          DNA;
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                                                                                                                                                                                                        entry)
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                           ρ
TNFalpha_promoter Human TNFalpha na
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            647
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                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ç
                                                                                                                                                                                                                                                                                                                                                                                                                        Score 104; DB 20; Pred. No. 2.8e-25; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          545
                                                                                                                 rheumatoid arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>ი</u>
                                                                                                                           a; apoptosis; inflammation;
disease; ulcerative colitis;
lupus erythematosus;
  native
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a tumour
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
promoter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -706TNFpGB3'UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             necrosis
                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                               104
                                                                                                                promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 2270;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             factor
                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                 ds
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RESULT 15
AAV39005
ID AAV39
XX
AC AAV39
AC AAV39
XX
DT 23-SH
XX
DE TNF-a
XX
KW TNF-a
KW acces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This sequence represents chimeric nucleic acid -1005TNFpGB3'UTR. This comprises at least one TNFalpha (tumour necrosis factor alpha) promoter enhancer region (AAZ20975-Z20978), a TNFalpha native promoter (AAZ20973), a DNA encoding a truncated form of the apoptosis-inducing Granzyme B protein (AAZ20982), and a TNFalpha 3'UTR (untranslated region) sequence (AAZ20979). TNFalpha is one of a number of cytokines correctly residently inflammatory cells. Upregulation and/or dysregulation conficted by inflammatory cells. Upregulation and/or dysregulation conficted to activated inflammatory cells crasponsible for exacerbation of chronic inflammatory diseases. Introduction of this chimeric nucleotide to activated inflammatory cells causes them to undergo apoptosis. Pharmaceutical compositions of this chimeric nucleotide may be useful for treating inflammatory disorders such as multiple sclerosis, Crohn's disease, ulcerative colitis, psoriasis, graft versus host disease, lupus erythematosus, insulin-dependent (type I) diabetes mellitus, ankylosing spondylitis, and in particular, rheumatoid arthritis. The use of such chimeric nucleotides offers simpler and cheaper long-term relief, in comparison with existing conventional pharmaceutical and invasive surgery methods.
                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDS
                                                         TNF-alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       promoter
                                                                                                23-SEP-19
                                                                                                                                                                              AAV39005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 4;
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                                                                                                                                                                                                                                                                                                                                                                     Vectors containing accessory molecule ligand genes - used for altering immunoreactivity of cells, particularly for treatment neoplasia or autoimmune disorders, e.g. rheumatoid arthritis
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Unclassified.

1 (bases 1 to 1275)

Mark, D.F., Lin, L.S., Lu, S.-D.Y. a CYSTEINE-DEPLETED MUTEINS OF BIOI NECROSIS FACTOR PROTEINS

Patent: WO 8604606-A 5 14-AUG-198
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CDNA encoding human tumor necrosis for E00702

E00702.1 GI:2168979

JP 1986040221-A/1.

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                                                 Eukaryota; Metazoa; Chordata; Craniata; Ve Mammalia; Eutheria; Primates; Catarrhini; 1 (bases 1 to 1324)
Baraa, B.A., Debitsudo, B.G., San, H.R. and (TUMOR NECTROTIC FACTOR
Patent: JP 1986040221-A 1 26-FEB-1986;
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Aggarwal, B.B., Lee, S.H., Goeddel, D.V. and Nedwin, G.E.
Tumor necrosis factor, methods for its preparation, compositions containing it, DNA encoding it and assay method using such DNA Patent: EP 0168214-A2 6 15-JAN-1986;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unclassified.
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26-FEB-1986
05-JUL-1985 JP 19
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Synergistic cytotoxic composition
Patent: US 4650674-A 2 17-MAR-1987;
Genentech, Inc.; So. San Francisco,
Location/Qualifiers
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Purification method for tumor necrosis fare purification method for tumor necrosis fare patent: US 4677197-A 2 30-JUN-1987;
Cetus Corporation; Emeryville, CA Location/Qualifiers
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Vile, R.G. and
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Patent: WO 940
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CANCER RES TECH (GB)
Location/Qualifiers
1. .1585
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/db_xref="taxon:32644"
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and Lin,L.S.
Human tumor necrosis factor
Patent: US 4677064-A 1 30-JUN-1987;
Cetus Corporation; Emeryville, CA
Location/Qualifiers
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Mark,D.F., Wang,A.M., Ladner,M.B.
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Human tumor necrosis factor
Patent: US 4677063-A 1 30-JUN-198
Cetus Corporation; Emeryville, CA
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Mark, D.F., wa.,
Arsdell, J.N.
Arsdell, J.N.
HUMAN TUMOR NECROSIS FACTOR
Patent: WO 8602381-A 5 24-APR-1986;
Location/Qualifiers
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rk,D.F., Lin,L.S., Lu,S.-D.Y. and Wang,A.M.
STEINE-DEPLETED MUTEINS OF BIOLOGICALLY ACTIVE
CROSIS FACTOR PROTEINS
tent: WO 8604606-A 3 14-AUG-1986;
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Location/Qualifiers
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/db_xref="GI:339738"
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                                                                 Nature 312 (5996), 724-729 (1984)
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2 (bases 1 to 1643)
Shirai,T., Yamaguchi,H., Ito,H., Todd,C.
Cloning and expression in Escherichia co
tumour necrosis factor
Nature 313 (6005), 803-806 (1985)
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Webster,K.A., Bishopric,N.H., Murphy,B., Lad.
Green,C.J.
Tissue specific hypoxia regulated constructs
Patent: US 6218179-A 36 17-APR-2001;
Location/Qualifiers
1. .1643
                                                                                                                                                        1 (bases 1 to 1643)
Pennica,D., Nedwin,G.E., Hayflick,J.S., Seeburg,P.H., D
Palladino,M.A., Kohr,W.J., Aggarwal,B.B. and Goeddel,D.
Human tumour necrosis factor: precursor structure, expr
homology to lymphotoxin
Nature 312 (5996), 724-729 (1984)
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US-08-655-086-1
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US-09-479-453-30
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| equence 15, A | equence θ, Ap | equence 1, Ap | equence 5, Appl | equence 5, Ap | equence 3, Appl | equence 2, Appl | equence 27, A  | equence 107, Ap | uence 107, Ap     | equence 2      | equence 19, App | equence 21,    | Sequence 20, Appl | equence 1, | equence 1, | equence 1, | Sequence 1, Appli |

## ALIGNMENTS

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RESULT 1
US-08-880-342-36
; Sequence 36, Application; Patent No. 6218179
; GENERAL INFORMATION:
COUNTRY: USA
ZIP: 94306
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-OOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION NUMBER: US/08/880,342
FILING DATE: 23-JUN-1997
CLASSIFICATION NUMBER: PCT/IB95/00996
FILING DATE: 13-NOV-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/IB95/00996
FILING DATE: 13-NOV-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/365,486
FILING DATE: 33-DEC-1994
ATTORNEY/AGENT INFORMATION:
NAME: Sholtz, Charles K.
REGISTRATION NUMBER: 8255-0018.30
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 324-0960
INFORMATION FOR SEQ ID NO: 36:
SEQUENCE CHARACTERISTICS:
LEUGTH: 1643 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: unknown
MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL: NO
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Dehlinger &
STREET: 350 Cambridge
CITY: Palo Alto
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f: Laderoute, Keith R.
f: Green, Christopher J.
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invention: Tissue Specific Hypoxia Regulated
invention: Therapeutic Constructs
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; Patent No. 6329148
; GENERAL INFORMATION:
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; LOCATION:
US-08-880-342-36
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US-09-166-186-1
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APPLICANT: Shanahan, William R. TITLE OF INVENTION: ANTISENSE OLI FILE REFERENCE: ISPH-0322 CURRENT APPLICATION NUMBER: US/09 CURRENT FILING DATE: 1998-10-05 NUMBER OF SEQ ID NOS: 250 SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Kao, Peter
TITLE OF INVENTION: Synergistic Appliture of Invention: Triptolides at File Reference: Sun-109PRV2
CURRENT APPLICATION NUMBER: US/09/CURRENT FILING DATE: 2000-02-15
NUMBER OF SEQ ID NOS: 4
SOFTWARE: FastSEQ for Windows Veri
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                                                                                                            Sequence 1, Application Patent No. 6080580 GENERAL INFORMATION:
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SEQ ID NO 4
                                                                       APPLICANT: Baker, Brenda
APPLICANT: Bennett, C. Frank
APPLICANT: Butler, Madeline M.
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LOCATION: (153)...(854)
19-505-250-4
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Pred. No: 5.5e-2
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AUTHORS: Naylor, S.L.
AUTHORS: Sakaguchi, A.Y.
AUTHORS: Smith, D.
AUTHORS: Smith, D.
AUTHORS: Jarrett-Nedwin, J.
AUTHORS: Pennica, D.
AUTHORS: Goeddel, D.V.
AUTHORS: Gray, P.W.
TITLE: Human lymphotoxin and tumor necrosis fac
TITLE: homology and chromosomal localization
JOURNAL: Nucleic Acids Res.
VOLUME: 13
ISSUE: 17
PAGES: 6361-6373
DATE: 1985-09-11
DATABASE ACCESSION NUMBER: X02910 Genbank
DATABASE ENTRY DATE: 1997-02-17
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Best Loc
Matches
                                                                                               GENERAL
                                                                                                                        Sequence
                                                                                                            Patent No.
APPLICANT: Baker, Brenda
APPLICANT: Bennett, C. Frank
APPLICANT: Butler, Madeline M.
APPLICANT: Shanahan, William R.
TITLE OF INVENTION: ANTISENSE OLIGONUCLEOTIDE
TITLE OF INVENTION: EXPRESSION
FILE REFERENCE: ISPH-0356
CURRENT APPLICATION NUMBER: US/09/313,932A
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TYPE: DNA
ORGANISM:
FEATURE:
NAME/KEY:
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NAME/KEY: exc
LOCATION: (2)
PUBLICATION
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Sequence 34, Array Sequence 34, Array Sequence 34, Array Patent No. 6277981; Patent No. 6277981; GENERAL INFORMATION:
APPLICANT: Tracel, Yedy; APPLICANT: Israel, Yedy; TITLE OF INVENTION: AN IMPROVED MITITLE OF INVENTION: EFFICACIOUS AND ARRAY OF THE ARRENCE: 9855-301
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PUBLICATION INFORMATION:
AUTHORS: Nedwin, G.E.
AUTHORS: Naylor, S.L.
AUTHORS: Sakaguchi, A.Y.
AUTHORS: Smith, D.
AUTHORS: Jarrett-Nedwin, AUTHORS: Pennica, D.
AUTHORS: Goeddel, D.V.
AUTHORS: Gray, P.W.
                                                                                                              -09-109-663-34
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PAGES: 6361-6373
DATE: 1985-09-11
DATABASE ACCESSION NUMBER OF THE PAGES: 1985-09-11
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                                                                                                                                                                                                                                                                                                                                                                      TITLE: structure, homology and JOURNAL: Nucleic Acids Res.
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1: 1997-02-17
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SEE: L

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NDENCE ADDRESS:
SEE: DILWORTH & BARRESE
: 333 EARLE OVINGTON BOULEVARD

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; TYPE: DNA
; ORGANISM: Homo sapic
; FEATURE:
; OTHER INFORMATION: TUS-09-109-663-34
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US-09-341-587-
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US-09-341-587-
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TITLE OF INVENTION: Protein Containing an SRC
FILE REFERENCE: 4121-108
CURRENT APPLICATION NUMBER: US/09/341,587
CURRENT FILING DATE: 1999-08-31
EARLIER APPLICATION NUMBER: PCT/DE98/00096
EARLIER FILING DATE: 1998-01-09
NUMBER OF SEQ ID NOS: 12
SOFTWARE: Patentin Ver. 2.1
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FILING DATE: 1998-07-03
APPLICATION NUMBER: 60/051,705
FILING DATE: 1997-07-03
DF SEQ ID NOS: 81
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                                                  FORMATION:
                                                              Application US/08655086
5821089
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Similarity 58.3%;
9; Conservative
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Similarity 100.0%;
4; Conservative (
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                                                                                                                                    TATTTGTGACAAGGAATCATCTG
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GRUSKIN, ELLIOTT A
BUECHTER, DOUGLAS
ZHANG, GUANGHUI
CONNOLLY, KEVIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: STEEN, JEFFREY S.
REGISTRATION NUMBER: 32,063
REFERENCE/DOCKET NUMBER: 203-
TELECOMMUNICATION INFORMATION:
TELEPHONE: 516-228-8484
TELEFAX: 516-228-8516
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
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Best I
                                                      Query Match
Best Local
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LENGTH: 3889
                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                             Patent No.
                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: CURRENT FILING DATE: 2000-
                                                                                                                                                                                                                           APPLICANT: Walker, Michael TITLE OF INVENTION: BONE REFILE REFERENCE: PB-0014 US
                                                                                         OTHER INFORMATION: 09-484-9708-39
                                                                                                                                                                              NUMBER OF SEQ II
SOFTWARE: PERL
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MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, V

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/655,086
                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                            FEATURE:
                                                                                                                                                TYPE: DNA
                                                                                                                                   ORGANISM: Homo
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CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                   Local
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                     TGGGGCCTACAGCTTTGATCCCTGACATCTGGAATCTGGAGACCAGGGAGCCTTTGGTTC
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Pred. No. 9.4;
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US-08-159-784-
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US-08-159-784-
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                                                                                                                                                RESULT
                                                                                                          Sequence 8:
Patent No.
                                                                                            GENERAL
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SEQUENCE C
LENGTH:
TYPE: n
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                                                      APPLICANT:
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ZIP: 02110-2804

COMPUTER READABLE FORM:

MEDIUM TYPE: 3.5" Diskette, 1.44 Mb

COMPUTER: IBM PS/2 Model 50Z or 55SX

OPERATING SYSTEM: MS-DOS (Version 5.0)

SOFTWARE: WordPerfect (Version 5.1)

CURRENT APPLICATION DATA:
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                             APPLICANT
                                           APPLICANT
                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                            REGISTRATION NUMBER: 29,066
REFERENCE/DOCKET NUMBER: 0024
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 542-5070
TELEFAX: (617) 542-8906
TELEFAX: 200154
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
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ATTORNEY/A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
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CITY: 1
STATE:
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Burgess, Christopher C.
Bushnell, Steven E.
Carroll III, Eddie
Catino, Theodore J.
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                                                                                                        Application US/09328111
262333
                                                    Steinmann, Ka
Astle, Jon H.
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643783
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                                                                                                                                                                                                                                                                                                                     Length 4031;
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RESULT 11
US-08-911-853-30/c
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SEQ ID NO 82
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Best Local
Query
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APPLICANT: Monahan, John E.
APPLICANT: Schlegel, Robert
TITLE OF INVENTION: NOVEL HUMAN GENES AND GENE EXPRESSION
TITLE OF INVENTION: PRODUCTS
FILE REFERENCE: CCD-257 (US)
CURRENT APPLICATION NUMBER: US/09/328,111
CURRENT FILING DATE: 1999-06-08
EARLIER APPLICATION NUMBER: US 60/088,801
                                                                                                            ATTORNEY/AGENT INFORMATION:
NAME: Glaister, Debra J
REGISTRATION NUMBER: 33,888
REFERENCE/DOCKET NUMBER: GC361-2
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650-846-7620
TELEFAX: 650-845-6504
                                                                          INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 2634 base pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EARLIER FILING DATE: 1998-06-10 NUMBER OF SEQ ID NOS: 850
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                                                                                                                                                                                                     PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/699,092
FILING DATE: 16-AUG-1996
                                                                                                                                                                                                                                                                                                                       ZIP: 94304-1013
COMPUTER READABLE I
MEDIUM TYPE: D1:
                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
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                         TOPOLOGY:
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OPERATING SYSTEM:
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Similarity 87.5%;
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Quax, Wilhelmus J.
VENTION: EXPRESSION
VENTION: EXPRESSION
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US-09-479-45
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US-09-479-
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                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION:
TELEPHONE: 650-846-7620
TELEFAX: 650-845-6504
INFORMATION FOR SEQ ID NO: 30:
SEQUENCE CHARACTERISTICS:
LENGTH: 2634 base pairs
TYPE: nucleic acid
Sequence 30, Applicat Patent No. 6313283
GENERAL INFORMATION:
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GENERAL INFORMATION:
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CITY:
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SOFTWARE: FastSEQ for Windows Version 2.0
JRRENT APPLICATION DATA:
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REFERENCE/DOCKET NUMBER: GC
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READABLE F
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INVENTION:
F SEQUENCES:
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6313283
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Similarity 54.2%;
2; Conservative
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ATION NUMBER:
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2; Conservative
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Quax, Wilhelmus J.
ZENTION: EXPRESSION SYSTEM FOR ALTERED
ZENTION: EXPRESSION LEVELS
EQUENCES: 37
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PPLICATION DATA:

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REGISTRATION NUMBER: 33,888
REFERENCE/DOCKET NUMBER: GC36
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650-846-7620
TELEFAX: 650-845-6504
INFORMATION FOR SEQ ID NO: 30:
SEQUENCE CHARACTERISTICS:
LENGTH: 2634 base pairs
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Best Local
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APPLICATION NUMBER: US/09/470
FILING DATE:
PRIOR APPLICATE:
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COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSFO for
                                   COUNTRY: USA
ZIP: 94304-1013
COMPUTER READABLE FOR MEDIUM TYPE: Dis
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APPLICANT:
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                                                                                                                                            CORRESPONDENCE ADDRESS:
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APPLICATION NUMBER: 08/9:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
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CITY: Pa
STATE: C
COUNTRY:
COMPUTER: IBM Compatible OPERATING SYSTEM: DOS SOFTWARE: FastSEQ for Wil
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INVENTION: 1
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NAME: Glaister, Debra J
REGISTRATION NUMBER: 33,888
REFERENCE/DOCKET
                                INFORMATION
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CORRESPONDENCE ADDRESS:
                      SEQUENCE
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CITY: 1
STATE:
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                                          TELEFAX:
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AX: 650-845-6504
ON FOR SEQ ID NO: 2:
E CHARACTERISTICS:
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                     N FOR SEQ ID NO:
CHARACTERISTICS:
                                      NCE/DOCKET NUMBER: GC36
JNICATION INFORMATION:
DNE: 650-846-7620
C: 650-845-6504
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READABLE FORM:
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Quax, Wilhelmus J.
INVENTION: EXPRESSION
INVENTION: EXPRESSION
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for Windows
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Search completed: July Job time: 52.2313 secs
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                                                                                                           Query Match 24.6%;
Best Local Similarity 54.2%;
Matches 52; Conservative
                                  1, 2003, 22:12:41
                                                                                                          Score 25.6; DB 4;
Pred. No. 18;
0; Mismatches 44;
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1: /cgn2_6/ptodata/1/pubpna/US07_PUBCOMB.seq:*

2: /cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*

3: /cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*

4: /cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*

5: /cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*

6: /cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*

7: /cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*

9: /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*

10: /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*

11: /cgn2_6/ptodata/1/pubpna/US10_NEW_PUB.seq:*

12: /cgn2_6/ptodata/1/pubpna/US10_PUBCOMB.seq:*

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US-10-272-328A-4
US-09-824-322B-1
US-09-932-300-34
US-09-801-371A-7
US-09-801-371A-6
US-09-801-371A-6
US-09-801-371A-6
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US-09-801-371A-10
US-09-801-371A-10
US-09-801-371A-10
US-09-818-512-3
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Sequence 36, Appli
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Sequence 669, Appli
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RESULT 2
US-09-801-371A-5/c
; Sequence 5, Application US/09801371A
; Patent No. US20020155569A1
; GENERAL INFORMATION:

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| ion US<br>5569A1<br>, Raym<br>Farhat<br>, Naye<br>uli, Y<br>REGUL<br>MANI<br>084-PC<br>100BER:<br>1999-0<br>S: 200<br>UMBER:<br>1999-0<br>S: 12  | 5340<br>74868<br>223<br>496<br>3347<br>4409<br>6728<br>6728<br>6728<br>6728<br>26048<br>26048<br>3309400<br>210<br>488<br>603<br>717<br>3506   |
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| ROUGH ND ITS USES ength 104; Indels 0; Gaps 0;   | Sequence 5, Appli<br>Sequence 67, Appl<br>Sequence 6687, Ap<br>Sequence 16, Appl<br>Sequence 16, Appl<br>Sequence 136, Appl<br>Sequence 35, Appl<br>Sequence 1, Appli<br>Sequence 782, Appli<br>Sequence 782, Ap<br>Sequence 13252, Ap<br>Sequence 13897, A<br>Sequence 2125, Ap<br>Sequence 1556, Ap<br>Sequence 1556, Ap<br>Sequence 1, Appli<br>Sequence 1, Appli<br>Sequence 1031, Ap<br>Sequence 1031, Ap<br>Sequence 1031, Ap<br>Sequence 1031, Ap<br>Sequence 3, Appli<br>Sequence 3, Appli<br>Sequence 3, Appli<br>Sequence 1031, Ap<br>Sequence 24, Appl<br>Sequence 24, Appl |

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Sequence 3, Application US/10218547

Publication No. US20030100074A1

GENERAL INFORMATION:
APPLICANT: Human Genome Sciences, Inc.
TITLE OF INVENTION: Methods And Compositions Fo.
TITLE OF INVENTION: Human Endokine Alpha
FILE REFERENCE: PF561

CURRENT APPLICATION NUMBER: US/10/218,547

CURRENT FILING DATE: 2002-08-15

PRIOR APPLICATION NUMBER: 60/312,542

PRIOR APPLICATION NUMBER: 60/312,542

PRIOR APPLICATION NUMBER: 60/330,761

PRIOR APPLICATION NUMBER: 50/330,761

PRIOR FILING DATE: 2001-10-30

NUMBER OF SEQ ID NOS: 57

SOFTWARE: PatentIn version 3.1

SEQ ID NO 3

LENGTH: 1643
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Sequence 4, Application US/10272411 Publication No. US20030100068A1 GENERAL INFORMATION:
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ORGANISM: Homo:
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APPLICANT:
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APPLICANT: Ben-Asouli, Yitzhak
TITLE OF INVENTION: REGULATION OF GENE EXPRESSION THROUGH
TITLE OF INVENTION: MANIPULATION OF MRNA SPLICING AND ITS
FILE REFERENCE: A34084-PCT-USA-A 066031.0147
CURRENT APPLICATION NUMBER: US/09/801,371A
CURRENT FILING DATE: 2001-03-07
PRIOR APPLICATION NUMBER: PCT WO 00/14255
PRIOR FILING DATE: 1999-09-06
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 4.0
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Pred. No. 1e-27;
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PUBLICATION INFORMATION:

DATABASE ACCESSION NUMBER: NCBI/ X01394.1

DATABASE ENTRY DATE: 1995-03-21

RELEVANT RESIDUES: (1)..(1643)

PUBLICATION INFORMATION:

DATABASE ACCESSION NUMBER: NCBI/ BC028148.1

DATABASE ENTRY DATE: 2002-05-01

RELEVANT RESIDUES: (1)..(1643)

PUBLICATION INFORMATION:

DATABASE ACCESSION NUMBER: NCBI/ M35592.1

DATABASE ENTRY DATE: 1993-04-27

RELEVANT RESIDUES: (1)..(1643)

PUBLICATION INFORMATION:
                                                                         SOFTWARE: POSEQ ID NO 4
LENGTH: 16
TYPE: DNA
ORGANISM:
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SEQ ID NO 4
LENGTH: 1
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APPLICANT:
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CURRENT APPLICATION NUMBER: US/10/272,328A
CURRENT FILING DATE: 2003-01-24
PRIOR APPLICATION NUMBER: 60/329,393
PRIOR FILING DATE: 2001-10-15
NUMBER OF SEQ ID NOS: 51
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DATABASE ACCESSION NUMBER: NCBI/
DATABASE ENTRY DATE: 2002-08-01
RELEVANT RESIDUES: (1)..(1643)
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CURRENT APPLICATION NUMBER: US/10/272,411
CURRENT FILING DATE: 2002-10-15
PRIOR APPLICATION NUMBER: 60/329,393
PRIOR FILING DATE: 2001-10-15
NUMBER OF SEQ ID NOS: 52
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Ross, F. Patri
Teitelbaum, St
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Ross, F. Patrick
Teitelbaum, Steven
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NOS: 52
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; PAGES: 6361-6373
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US-09-824-322B-1
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-09-824-322B-1
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APPLICANT: Butler, Madeline M.
APPLICANT: Shanahan, William R.
TITLE OF INVENTION: ANTISENSE OLIGONUCLEOTIDE MODULATION OF TUMOR NECROSIS FACTOR-ALF
TITLE OF INVENTION: ALPHA) EXPRESSION
FILE REFERENCE: ISPH-0501
CURRENT APPLICATION NUMBER: US/09/824,322B
CURRENT FILING DATE: 2001-04-02
PRIOR APPLICATION NUMBER: US 09/313,932
PRIOR FILING DATE: 1999-05-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: US PRIOR FILING DATE: 1998-10-05 NUMBER OF SEQ ID NOS: 503
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Sakaguchi, A.Y.
Smith, D.
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; ORGANISM: HOMO US-09-801-371A-7
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APPLICANT: Ben-Asouli, Yitzhak
TITLE OF INVENTION: REGULATION OF GENE EXPRESSION THROUGH
TITLE OF INVENTION: MANIPULATION OF MRNA SPLICING AND ITS
FILE REFERENCE: A34084-PCT-USA-A 066031.0147
CURRENT APPLICATION NUMBER: US/09/801,371A
CURRENT FILING DATE: 2001-03-07
PRIOR APPLICATION NUMBER: PCT WO 00/14255
PRIOR FILING DATE: 1999-09-06
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 4.0
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I: ISRAEL, Yedy
INVENTION: METHODS OF
ERENCE: 9855-3U2
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Pred. No. 1.1e-27;
Mismatches 0;
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APPLICANT: Jarrous, Nayef

APPLICANT: Ben-Asouli, Yitzhak

TITLE OF INVENTION: REGULATION OF GENE EXPRESSION THREITLE OF INVENTION: MANIPULATION OF MRNA SPLICING AND FILE REFERENCE: A34084-PCT-USA-A 066031.0147

CURRENT APPLICATION NUMBER: US/09/801,371A

CURRENT FILING DATE: 2001-03-07

PRIOR APPLICATION NUMBER: PCT WO 00/14255

PRIOR FILING DATE: 1999-09-06

NUMBER OF SEQ ID NOC
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LENGTH: 4:
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APPLICANT: Ben-Asouli, Yitzhak
TITLE OF INVENTION: REGULATION OF GENE EXPRESSION
TITLE OF INVENTION: MANIPULATION OF MRNA SPLICING
FILE REFERENCE: A34084-PCT-USA-A 066031.0147
CURRENT APPLICATION NUMBER: US/09/801,371A
CURRENT FILING DATE: 2001-03-07
PRIOR APPLICATION NUMBER: PCT WO 00/14255
PRIOR FILING DATE: 1999-09-06
                                                                  TYPE: DNA
ORGANISM: Homo
                                                                                                                                SOFTWARE:
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ORGANISM: Homo
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CURRENT APPLICATION NUMBER: US/09/796,69

CURRENT FILING DATE: 2001-03-01

PRIOR APPLICATION NUMBER: 60/186,126

PRIOR APPLICATION NUMBER: 60/190,479

PRIOR APPLICATION NUMBER: 60/200,545

PRIOR APPLICATION NUMBER: 60/200,545

PRIOR APPLICATION NUMBER: 60/200,303

PRIOR APPLICATION NUMBER: 60/200,303

PRIOR APPLICATION NUMBER: 60/200,779

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TITLE OF INVENTION: REGULATION OF GENE EXPRESSION THROUGH
TITLE OF INVENTION: MANIPULATION OF MRNA SPLICING AND ITS
FILE REFERENCE: A34084-PCT-USA-A 066031.0147
CURRENT APPLICATION NUMBER: US/09/801,371A
CURRENT FILING DATE: 2001-03-07
PRIOR APPLICATION NUMBER: PCT WO 00/14255
PRIOR FILING DATE: 1999-09-06
NUMBER: CEC. TO NO.
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                                                                            R FILING DATE: 2000-04-28
R APPLICATION NUMBER: 60/200,999
R FILING DATE: 2000-05-01
R APPLICATION NUMBER: 60/202,084
R FILING DATE: 2000-05-04
R APPLICATION NUMBER: 60/206,201
R FILING DATE: 2000-05-22
R APPLICATION NUMBER: 60/218,950
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Application US/09801371A
S20020155569A1
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No. US20020198362A1
RMATION:
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ZENTION: COMPOSITIONS AND METHODS FOR THE DETECTION, DIAGNOSIS AND THER
ZENTION: HEMATOLOGICAL MALIGNANCIES
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Ben-Asouli,
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Conservative
                                       2000-07-14
NUMBER: 60/222,903
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               60/223,416
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0; Mismatches
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; OTHER INFORMATION:
US-09-796-692-6223
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CURRENT FILING DATE: 2001-11-06
PRIOR APPLICATION NUMBER: US 60/186,126
PRIOR FILING DATE: 2000-03-01
PRIOR FILING DATE: 2000-03-17
PRIOR APPLICATION NUMBER: US 60/200,545
PRIOR FILING DATE: 2000-04-27
PRIOR APPLICATION NUMBER: US 60/200,303
PRIOR APPLICATION NUMBER: US 60/200,303
PRIOR APPLICATION NUMBER: US 60/200,779
PRIOR APPLICATION NUMBER: US 60/200,779
PRIOR APPLICATION NUMBER: US 60/200,999
PRIOR APPLICATION NUMBER: US 60/200,999
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LENGTH: 418
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R FILING DATE: 2000-05-01
R APPLICATION NUMBER: US 60
P FILING DATE: 2000-05-04
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R APPLICATION NUMBER: US 60
R APPLICATION NUMBER: US 60
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INVENTION: Hematologic
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NOS: 9597
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NUMBER: US 6
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CURRENT APPLICATION NUMBER: US/09/874,069
CURRENT FILING DATE: 2001-06-06
PRIOR APPLICATION NUMBER: PCT/US00/32525
PRIOR FILING DATE: 2000-11-30
PRIOR APPLICATION NUMBER: 60/168,621
PRIOR FILING DATE: 1999-12-03
NUMBER OF SEQ ID NOS: 6
COMMUNICATION Ver. 2.0
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US-09-801-371A
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US-09-874-069
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                                                                                                  TYPE: DNA
ORGANISM:
-09-874-069-
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APPLICANT: Ben-Asouli, Yitzhak
TITLE OF INVENTION: REGULATION OF GENE EXPRESSION THROUGH
TITLE OF INVENTION: MANIPULATION OF MRNA SPLICING AND IT:
FILE REFERENCE: A34084-PCT-USA-A 066031.0147
CURRENT APPLICATION NUMBER: US/09/801,371A
CURRENT FILING DATE: 2001-03-07
PRIOR APPLICATION NUMBER: PCT WO 00/14255
PRIOR FILING DATE: 1999-09-06
NUMBER OF SEQ ID NOS: 12
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US20020155569A1
CTGAACTCGCTGTCGCCAATGTCATTGGTCGCCTTCACTCGGAACTTGTAGGACGTGAAG
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Pred. No. 18 the number of results predicted by chance to have 2

> score grand is o reater than or equal to the score of the result being printed, derived by analysis of the total score distribution.

# SUMMARIES

| REFERENCE<br>AUTHORS<br>TITLE<br>JOURNAL | RSION<br>YWORDS<br>URCE<br>ORGANI      | RESULT 1 G13533 LOCUS DEFINITION ACCESSION   |            | C 44                       | ωΝ                               | ) <b>11</b> C        | 900        | » 7         |                | ωυ          | υw           |                                  |     |     |             |                      |              |              |            |  |        |                 | 11<br>12                             |                                 | ο Φ -          | 7 6         | UI 4         | - ω            |                  | Result<br>No. S |
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| as<br>er<br>li                           | 33.1 Sapi sapi ryota                   | 533<br>5-11076                               |            | 63.7<br>63.7               | 4.                               |                      |            | 9.          | 00             | 00.         | 80           | 00                               | 000 | 200 |             | 000                  | 00.          | 000          | 88         | 000  | 00.    | 00.             | 88                                   | 00.                             | 000            | 38          | 00.          | 80.            |                  | Query<br>Match  |
| to 4 and C and C d, Oli                  | GI:112 ns. ns Metaz                    | Human  |            | 177917<br>186254           | ω<br>5                           | 57                   | 67         | 145         | 8466<br>1205   | 39          | 0000         | 631<br>180                       | 11  | 112 | 500         | ა<br>დ<br>დ          | 67<br>10     | 604          | 000        | 58<br>85                                   | 58     | 58              | 58                                   | 46                              | 1324           | S<br>S<br>S | N            | 81             | 400<br>817       | Length          |
| ox,D<br>vier<br>0)                       | 272<br>a;                              | Homo   |            | 20                         | 44                               | 44                   | · 42- 1    | 9           | NΘ             | o co        | စဖ           | യ യ                              | 90  | יסי | တဖ          | თ თ                  | 9 9          | 900          | ט ט        | ഗ ത  | 00     | ) O)            | ത ത                                  | 6 L                             |                | ש מי        | σ v          | o 0            | 11               | DB              |
| R. M., Cox, D.R. (2000)                  | ata; Ve                                | 400 bp DNA<br>b sapiens STS genomic,         | ALIGNMENTS | AC025824<br>AC091544       | 01192<br>01192                   | BTNFB                | TNE        | F0199       | 01G<br>008     | 28          | 0005         | <b>4</b> 4                       | TNF | 900 | NFA         | AR100270<br>AR149925 | 2814<br>TNFX | NFR          | 7541       | 0842<br>UMTN                               | 38     | 0416            | I08863<br>A37272                     | SYNT<br>0424                    | 3610           | 079         | 08430        | 02109          | G13533<br>A16444 | ID              |
| nomitiridae; nomo.                       | [15]                                   | linear STS 30-MAR-2000 sequence tagged site. |            | 025824 Homo<br>091544 Homo | 11927 Bos indi<br>11926 Bos taur | 6 Rabbit<br>0 Rabbit | 845 Rabbit | 19963 Papic | 29756<br>00899 | 62801 Human | 00505 Homo s | )26 Homo sapie<br>768 Homo sapie | 141 |     | 910 Human g | 100270 Seque         | 0281<br>6331 | 1394 Human n | 7541 Seque | 8 <b>429 Sequence 3</b><br>0988 Human tumo | 8384 9 | 4169 Sequence 1 | I08863 Sequence 3 A37272 Sequence 12 | 35592 Syntheti<br>4244 Sequence | 510 Sequence 2 | 953 Seque   | 130 Sequence | 109 DNA sequen | 3533<br>444      | Description     |

| TITLE<br>JOURNAL  | AUTHORS                   | REFERENCE          |  |  | ORGANISM       | SOURCE        | KEYWORDS | VERSION             | ACCESSION | DEFINITION           | LOCUS                                    | G13533 | RESULT 1 |
|---|---------------------------|--------------------|--|--|----------------|---------------|----------|---------------------|-----------|----------------------|--|--------|----------|
| Unpublished, Olivier, M., Cox, D.R. (2000) Unpublished (2000) | Olivier, M. and Cox, D.R. | 1 (bases 1 to 400) | Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. | <pre>Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;</pre> | Homo sapiens · | Homo sapiens. | STS.     | G13533.1 GI:1129272 |           | 'S genomic, sequence | G13533 400 bp DNA linear STS 30-MAR-2000 |        |          |

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Eukaryota; Metazoa; Chordata; C;

Mammalia; Eutheria; Primates; C;

1 (bases 1 to 817)

Soma, G.I., Mizuno, D., Tsuji, Y.

Anti-aids preparation

Patent: EP 0450240-A 9 09-OCT-1

Soma, Gen-Ichiro; Mizuno, Den';

Location/Qualifiers

1. 817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Michael Olivier, David R. Cox Stanford Human Genome Center Stanford University School of Medicine 4005 Miranda Ave. 2nd Fl., Palo Alto, CA Tel: (650) 320-5800 Fax: (650) 320-5801 Email: olivier@shgc.stanford.edu Primer A: CACTAAGAATTCAAACTGGGGC Primer B: GAGGAAGGCCTAAGGTCCAC STS size: 166 PCR Profile:
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/map="6"
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PN JP 1989256390-A/1
PD 12-OCT-1989
PF 03-APR-1988 JP 1988081683
PI SOMA GENICHIRO, MIZUNO DENICHI, TSUJI YOSHIAKI PC
C12N15/00, A61K37/24, C07K13/00, C12P21/02, (C12P21/02, C12R1:19); CC
strandedness: Double;
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CC topology: Linear;
CC hypothetical: No;
CC anti-sense: No;
CC *source: library=THP-1 cell;
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Homo sapiens TNF-alpha gene for tumor UTR, country United Arab Emirates.
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TNF-alpha gene; tumor necrosis factor
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/db_xref="taxon:3847"
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Mark,D.F., Lin,L.S., Lu,S.-D.
CYSTEINE-DEPLETED MUTEINS OF NECROSIS FACTOR PROTEINS
Patent: WO 8604606-A 5 14-AUG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Farhan, A.J.

Direct Submission
Submitted (24-SEP-1999) Farhan A.J., CID-Immunology Research
Division, Manchester University, Medical School, Stopford Building,
Oxford Road, Manchester, MI3 9PT, UNITED KINGDOM
                                                                                                                                                                                                                                                                                                                                                                                                  Similarity 43; Conserv
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CDNA encoding human tumor necro E00702

E00702.1 GI:2168979

JP 1986040221-A/1.

Homo sapiens

Homo sapiens

Eukaryota; Metazoa; Chordata; C

Mammalia; Eutheria; Primates; C

1 (bases 1 to 1324)

Baraa, B.A., Debitsudo, B.G., San

TUMOR NECTROTIC FACTOR
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OS homosapie
PN JP 198604
PD 26-FEB-19
PF 05-JUL-19
PR 05-JUL-19
                                                                                                                                   1 (bases 1 to 1323)
1 (bases 1 to 1323)
Aggarwal, B.B., Lee, S.H., Goeddel, D.V. and Nedwin, G.E.
Tumor necrosis factor, methods for its preparation, compositions containing it, DNA encoding it and assay method using such DNA Patent: EP 0168214-A2 6 15-JAN-1986;
Location/Qualifiers
1. .1323
/organism="unknown"
298 a 387 c 308 g 330 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Patent:
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DNA encoding human tumor necros
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00702.1 GI:2168070
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D 26-FEB-1986

D 26-FEB-1986

F 05-JUL-1985 JP 1985149075

F 05-JUL-1984 US 84 627959, 05-JUL-1984 US 84 628059, PR

S-JUL-1984 US 84 628060, 03-DEC-1984 US 84 677156, PR

3-DEC-1984 US 84 677257, 03-DEC-1984 US 84 677454 PI BAR

USHIYAN AGAAWARU, DEBITSUDO BANNOOMAN GETSUDERU, PI SAN HII RI

GUREN EBAN NEDOUIN

C A61K35/12,A61K35/02,A61K35/14,A61K35/74,A61K37/04,C07H21/02,

C C07H21/04,
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larity 100.0%;
Conservative C
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                                                                                                                                                                                    *source: cell_type=promyelocytes;
*source: cell_line=HL-60;
*source: clone=lambda42-4, lambda16-4;
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strandedness:
                                                                                                                                                                                                                            hypothetical: No; anti-sense: No;
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                                                   Location/Qualifiers
1. .1324
            /organism="Homo sapiens"
/db_xref="taxon:9606"
387 c 308 q 33:
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Pred. No. 3.6e-07;
Mismatches 0;
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.532
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                                                                                           tumor
                                                                                                                     tumor necrosis
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677454 PI BARAA
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AUTHORS
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SYNTNETRP
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3031624
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1 (bases 1 to 1379)
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Synergistic cytotoxic composition
Patent: US 4650674-A 2 17-MAR-1987;
Genentech, Inc.; So. San Francisco,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity 100.0%;
43; Conservative
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43; Conservative
                                                                                                                                                                           Nobuhara, M., Kanamori, T., Nagase, Y., Tohyama, J., Andoh, S. and Kurimoto, M. The expression of human tumor necros Nucleic Acids Symp. Ser. 17, 131-134
                                                                                                                                                                                                         Nobuhara, M.,
                                                                                                                                                                                                                                                     рм324-346.
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1 (bases 1 t
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/note="synthetic tumor necrosis factor precursor"
/codon_start=1
/transl_table=11
/protein_id="AAC42098.1"
/db_xref="GI:209486"
/translation="MSTESMIRDVELAEEALPKKTGGPQGSRRCLFLSLFSFLIVAGA
TTLFCLLHFGVMGPQREEFPRDLSLISPLAQAVRSSSRTPSDKPVAHVVANPQAEGQL
QWLNRRANALLANGVELRDNQLVVPSEGLYLIYSQVLFKGQGCPSTHVLLTHTISRIA
VSYQTKVNLLSAIKSPCQRETPEGAEAKPWYEPIYLGGVFQLEKGDRLSAEINRPDYL
                                                                                                 /organism="synthetic construct"
/db_xref="taxon:32630"
178. .879
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Puri
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Mark,D.F., Lin,L.S., Thomsom,J.W. and Yamamoto,R.
ARGININE-DEPLETED HUMAN TUMOR NECROSIS FACTOR
Patent: WO 8806625-A 3 07-SEP-1988;
Location/Qualifiers
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TCAAACTGGGGCCTCCAGAACTCACTGGGGCCTACAGCTTTGA 43
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rification method for tumor necrosis
tent: US 4677197-A 2 30-JUN-1987;
tus Corporation; Emeryville, CA
Location/Qualifiers
1. .1465
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400. .876
/product="synthetic tumor necrosis factor"
438 c 336 g 287 t
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429 c 363 g
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Pred. No. 3.6e-07;
Mismatches 0;
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Pred. No. 3.6e-07;
Mismatches 0;
                                               Score 43; DB 6;
Pred. No. 3.6e-07;
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Mark,D.F., Wang,A.M., Ladner,M.B., Cr
Arsdell,J.
Human tumor necrosis factor
Patent: US 4677063-A 1 30-JUN-1987;
Cetus Corporation; Emeryville, CA
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1 (bases 1 to 1585)

Mark,D.F., Wang,A.M., Ladner, ...

and Lin,L.S.

Human tumor necrosis factor

Patent: US 4677064-A 1 30-JUN-1987;

Cetus Corporation; Emeryville, CA

Location/Qualifiers

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PT Regulatic Cis-acting RNA-active tumour new 07-SEP-19 26-OCT-19 Homo sapiens. Cis-actin 06-SEP-1999; 16-MAR-2000. 12-JUL-2000 2000-257000/22. ting sequence; intron removal; trans-acting factor; alpha-subunit; tivated protein kinase; eukaryotic initiation factor 2; eIF2alpha; necrosis factor alpha; TNF-alpha; gene therapy; ss. MISSIN 255-A1. 998; g nucleotide sequence derived from human TNF-alpha ₽, Osman (first RES 98IL-0126112. 98IL-0126757. 99WO-IL00483. Ħ, ζ. entry) DEV CO. Jarrous Z Ben-Asouli ¥;

Regulation

of gene expression by mRNA splicing is

carried out using

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The specification describes a cis-acting nucleotide sequence which is capable of removing introns from a precursor transcript encoded by a gene which harbours at least one cis-acting nucleotide sequence. This removal is effected during the production of mRNA of the gene, and depends on activation of a trans-acting factor which is an RNA-activated protein kinase capable of phosphorylating the alpha-subunit of eukaryotic initiation factor 2 (eIF2alpha). Insertion of a cis-acting nucleotide sequence, derived from the 3' untranslated region (3'UTR) of the human transcripts encoded by that gene sensitive to the used to transform host cells to regulate gene expression at the mRNA plicing level, for gene therapy, and to produce a recombinant therapy to industrially or agriculturally applicable protein. The present sequence represents a cis-acting nucleotide sequence of the
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fication describes a cis-acting nucleotide sequence which is if removing introns from a precursor transcript encoded by a harbours at least one cis-acting nucleotide sequence. This is effected during the production of mRNA of the gene, and activation of a trans-acting factor which is an RNA-activated inase capable of phosphorylating the alpha-subunit of eukaryotic in factor 2 (eIF2alpha). Insertion of a cis-acting nucleotide derived from the 3' untranslated region (3'UTR) of the human crosis factor alpha (TNF-alpha) gene, into another gene renders of precursor transcripts encoded by that gene sensitive to the
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                                                                                                                                                                                                                                                                                                                                    98;
                                                                                                                                                           Page 15;
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Pred. No. 1.6e-07;
9; Mismatches 0;
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RESULT 4
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This sequence represents a human TNFalpha (tumour necrosis factor alpha) 3'UTR (untranslated region). Chimeric nucleotides (AAZ20983, 220984) were constructed comprising at least one TNFalpha promoter enhancer region (AAZ20975-Z20978), a TNFalpha promoter (AAZ20972-Z20974), a DNA encoding the apoptosis-inducing Granzyme B protein (AAZ20972-Z20974), and a TNFalpha 3'UTR sequence. TNFalpha is one of a number of cytokines produced by inflammatory cells. Upregulation and/or dysregulation of cytokines in inflammed tissue may be directly or indirectly responsible for exacerbation of chronic inflammatory diseases. Introduction of the chimeric nucleotide to activated inflammatory cells causes them to undergo apoptosis. Pharmaceutical compositions of the chimeric nucleotide may be useful for treating inflammatory disorders such as multiple sclerosis, Crohn's disease, ulcerative colitis, psoriasis, graft versus host disease, lupus erythematosus, insulin-dependent (type I) diabetes mellitus, ankylosing spondylitis, and in particular, rheumatoid arthritis. The use of such chimeric nucleotides offers simpler and cheaper long-term relief, in comparison with existing conventional pharmaceutical and invasive surgery
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 43
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promoter
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be use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    splicing level, for gene then therapeutic (e.g. an enzyme, protein) or industrially or a present sequence represents a invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             02-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TNFalpha; tumour necrosis factor alpha; chimeric; multiple sclerosis; Crohn's d psoriasis; graft versus host disease; lediabetes; ankylosing spondylitis; rheum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAZ20979
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                                                                                                                                                                                                                                                                                                                                                                                        Example
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12-JAN-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (BOEH ) BOEHRINGER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27-FEB-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAZ20979 standard; DNA; 787 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                   chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1999-527630/44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sapiens.
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43; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ç
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                                                                                                                                                                                                                                                                                                                                                                                                                           c polynucleotide consisting of a trand an apoptosis-inducing Granzyme
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                                                                                                                                                                                                                                                                                                                                                                                      Page
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BP;
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ity 100.0%;
servative (
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                                                                                                                                                                                                                                                                                                                                                                                         60-61;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INGELHEIM PHARM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gene therapy, and to produce a recombinant enzyme, hormone, growth factor, cytokine, lally or agriculturally applicable protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;
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                                                                                                                                                                                                                                                                                                                                                                                       English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 43; DE Pred. No. 1.8; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              kinase (PKR) activity.
s to regulate gene expri
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            alpha; apoptosis; inflammation; nn's disease; ulcerative colitis; ase; lupus erythematosus; rheumatoid arthritis; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INC
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1.8e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                            a tumour necrosis factor yme B polynucleotide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cytokine,
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                                                                                                                                                                                                                                                                                                                           factor alpha)
3, 220984)
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The
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21-SEP-19

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(first

entry)

AAQ04340

AAQ04340

standard;

DNA;

817

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RESULT 6
AAQ04340
ID AAQ0
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AC AAQ0
XX
DT 21-S
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                                                                                                                         Query Match
Best Local S
Matches 43
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Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                         cells. Ti from meta: tumors.
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04-FEB-191
                                                                                                                                                                                                                                                                                                                  Soma
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo
                                                                                                                                                                                                                                                                   Anti-tumor polypeptides - prepared using recombinant DNA prepared from genomic DNA of human acute leukemia cell THP-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Anti-tumor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAN70075
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                             04-FEB-19
                                                                                                                                                                                                                                                                                                                                                                                                               02-DEC-1987.
                                                                                                                                                                                                                                                                                                                                                                                                                                 EP247906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human anti-tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-JAN-19
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                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                 Disclosur
                                                                                                                                                                                                                                                                                                                             Mizuno
                                                                                                                                                                                                                                                                                                                                              (MIZU/) MIZUNO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                                                                                                              sequence is an Xho-PstI fragment of an anti-tumor protein. polypeptide is cytotoxic to human tumor cells but not to normalls. They are also cytotoxic to primary cell cultures obtained n metastasis lesions of patients suffering from striated muscleors. They are also resistant to all chemotherapeutic agents. also AAN70073-74, AAP70077-78 and AAP95592.
                                                                                                                                                                                                                                                                                                1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens.
                                                                                                                                                                                                                                                                                                                  GI;
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                                                                                     716
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                                                                                                                                  Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 43; DB 20; imilarity 100.0%; Pred. No. 2.5e-07; Conservative 0; Mismatches 0;
                                                                                  TCAAACTGGGGCCTCCAGAACTCACTGGGGCCTACAGCTTTGA 43
                                                                                                                                                                                                                                                 e; Fig 7; 63pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               815 BP; 183 A; 267 C; 205 G; 160 T; 0 other;
                                                                                                                                                                                                                                                                                                 -336540/48.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          787 BP; 190 A; 204 C;
                                                                                                                        100.0%; Score 43; DB 8; 1 larity 100.0%; Pred. No. 2.5e-07; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cancer;
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86JP-0021302.
                                                                                                                                                                                                                                                                                                                                                                                             87EP-0400261.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          polypeptide Xho-PstI fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cytotoxic;
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                                                                                                                                          Length 815;
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RESULT 7
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X C C X S X F T X R X F X R X F X C X X X X E X
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Best Local S
Matches 43
            Section of from THP-1
                                           Novel DNA, - useful as
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                                                              WPI;
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                                                                                                                                                                                                                                                                                                                                                                                                                                            THP-
                                                                                      06-OCT-1987;
                                                                                                  06-OCT-1987;
                                                                                                                                       THP-1
                                                                                                                                                 Anticarcinogenic
                                                                                                                                                                                       AAN91035;
                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                           Disclosure;
Sequence
                                                                          (SENG/) SEN G
                                                                                                              13-APR-1989
                                                                                                                           JP01095784-A
                                                                                                                                                                           11-MAR-1990
                                                                                                                                                                                                    AAN91035
                                                                                                                                                                                                                                                                                                                                                     (SOMA/) SOMA
                                                                                                                                                                                                                                                                                                                                                                               22-SEP-1988;
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                                                                                                                                                                                                                                                                                                                                                                                                                   Homo
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                                                                                                                                       cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                leukaemia
                                                                                                                                                               PstI
                                                                                                                                                                                                                                                       100.0%; Similarity 100.0%; 43; Conservative 0
                             17pp;
           ì.
                                         , plasmid and polypeptide(s) as anticarcinogenic agents
                                                                                                                                                                                                                                TCAAACTGGGGCCTCCAGAACTCACTGGGGCCTACAGCTTTGA 43
                                                                                                                                                                                                                                                                                                                       one
818
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            gene
cells
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                              Japanese
              (C)
                                                                                      87JP-0252174
                                                                                                  87JP-0252174.
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                                                                                                                                                                                                                                                                                                                                                                                                                                cell;
                  for
                                                                                                                                                                                                                                                                                                           Japanese
184
                                                                                                                                                  agent;
                                                                                                                                                                                                   DNA;
                                                                                                                                                                                                                                                                                              of TNF
                                                                                                                                                              of
                  anticarcinogenic
                                                                                                                                                                          entry)
                                                                                                                                                                                                                                                                                                                      derivation agents n has TNF activity
A;
                                                                                                                                                                                                                                                                                                                                                                                                                               THP-1;
                                                                                                                                                              gene
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268
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ü
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                                                                                                                                                                                                                                                                                                                                                                                                                                anti-tumour
                                                                                                                                                                                                                                                         Score 43; DB 11;
Pred. No. 2.5e-07;
Mismatches 0;
                                                                                                                                                                                                                                                                                  206 G;
206
                                                                                                                                                               anti-cancer
                                                                                                                                                                                                                                                                                              agents
<u>ი</u>
                                                                                                                                                 agent;
                  peptide
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160
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other;
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88
                  18
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                  genomic
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                  DNA
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                  or
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RESULT 9
AAN90969
ID AAN9
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AC AAN9
AC AAN9
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DT 11-A
XX
DE Part
XX
KW Anti
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AAN70072
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Best Local S
Matches 43
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Best Local S
Matches 43
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Soma GI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17-JUL-198
04-FEB-198
                                                                       Part
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI;
                                                                                                                                                         AAN90969;
                                                                                                                                                                                                      AAN90969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
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                           Anticarci
                                                                                                                  11-MAR-19
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                                                                                                                                                                                                                                                                                                           imilarity 100.0%; conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hey are also cytotoxic to human tumor cells but not to normal hey are also cytotoxic to primary cell cultures obtained stasis lesions of patients suffering from striated muscle They are also resistant to all chemotherapeutic agents. AAN70073-75, AAP70077-78 and AAP95592.
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                           nogenic
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                           agent;
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Pred. No. 2.5e-07;
Mismatches 0;
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Pred. No. 2.7e-07;
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                           agent;
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19-OCT-1982;
15-APR-1983;
20-DEC-1983;
15-OCT-1984;
07-FEB-1985;
                                WPI; 1986:
P-PSDB; A/
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43; Conservative
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82US-0435154.
83US-0486162.
83US-0564224.
84US-0661026.
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Pred. No. 2.7e-07;
Mismatches 0;
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05-JUL-1984;
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25-JUL-1984;
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                                                                    WPI; 19; P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The sequence encoding TNF produced by the promyelocytic leukemia cell line (HL-60, ATCC no.CCL240) has been cloned and expressed in E.coli (see AAN60557). Neither of the cysteine residues (69 and 101) the TNF sequence appears to be involved in disulphide linkages. The patentors claim a novel synthetic mutein of a biologically active hTNF protein, having at least one cysteine residue free from a disulphide link and non-essential to the activity and having at least one of the cysteine residues deleted or replaced by another AA Plasmid pAW731 (Ser 69) is claimed.
                  Pure tumour sequences a
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                   necrosis factor and mutant d transformed cells.
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84US-0628060.

84US-0677156.

84US-0677257.

84US-0627969.

84US-0677267.
                                                                                                                     Lee SH,
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                                    forms
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RESULT 12
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Best Loc
Matches
The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense oligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with lung/respiratory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and
                                                                                                                                                                                   Low ader
trigger
cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence encodes the pure human tumour necrosis factor, mutants which are covered by the claims. TNF and mutants are useful in treating tumours, especially in tandem with interferon. The encoding sequence may be used to create plasmid pTrpXAPTNF, all transformation of an E.coli host for the expression of TNF.
                                                                                                                                                                                                                                                                                                 (UYEC-)
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                                                                                                                                                         Disclosure;
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gger adenosine receptors during metabolism, useful e.g. for tr
cers and respiratory obstructions -
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Similarity 100.0%;
43; Conservative
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                                                                                                                                                        Page 887;
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J W.
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Pred. No. 2.7e-
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Page 814-815;

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RESULT 13
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bronchitis,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cancer;
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                                                                                    antisense oligonucleotides useful for treating e.g. pulmonary oconstriction, inflammation, allergies, asthma, hypertension, nchitis, emphysema, respiratory distress syndrome, ischemia or
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  leukaemia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           denosine receptor; low adenosine antisense oligonucleotide; othioate; impaired respiration; inflammation; allergy; disease; bronchoconstriction; inhibitor; antiinflammatory; rgic; antiasthmatic; cytostatic; analgesic; impaired airway; ease; ischaemic condition; pulmonary vasoconstriction; asthma; ory distress syndrome; pain; cystic fibrosis; emphysema; y hypertension; chronic obstructive pulmonary disease; COPD; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard;
                                                                                                                                                                                                                                                                                                            98;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 invention.
                                                                                                                                                                                                                                                                 EAST CAROLINA
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RESULT 14
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          inflammation. The ON can have antiinflammatory, antialergies, and/or inflammation. The ON can have antiinflammatory, antiallergie, and/or antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the ONs reduces side effects. The A-containing ONs break down with the release of deoxyadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA33213 to AAA35312 represent the nucleotide sequences given in the sequence listing from the present the sequences are also called SEQ ID NO:1 to 185, but the sequences of differ from the previously named sequences. SEQ ID NO:11 to 1680 (AAA32323 to AAA3392) are specifically claimed ONs from the present invention. N.B. Sequences given in the disclosure of the present invention do not match up with their corresponding SEQ ID NO: sequences.
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Best Local S
Matches 43
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                         WPI; 1988-271165/38
P-PSDB; AAP80728.
                                                                                                                                                                         07-SEP-1988
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43; Conservative
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                                                                                                                                                                                                                      E.coli (see AAN60557). Neither of the cysteine residues (69 and 101) the TNF sequence appears to be involved in disulphide linkages. The patentors claim a novel synthetic mutein of a biologically active hTNF protein, having at least one cysteine residue free from a disulphide link and non-essential to the activity and having at least one of the cysteine residues deleted or replaced by another AA. Plasmid pAW731 (Ser 69) is claimed.
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ALIGNMENTS

REFERENCE AUTHORS

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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

E 1 (bases 1 to 248)

S Adams,M.D., Kerlavage,A.R., Fleischmann,R.D., Fuldner,R.A., Bult,C.J., Lee,N., Kirkness,E.F., Weinstock,K.G., Gocayne,J.D., White,O., Sutton,G., Blake,J.A., Brandon,R.C., Chiu,M.-W., Clayton,R.A.,

Cline,R.T., Cotton,M.D., Earle-Hughes,J., Fine,L.D., FitzGerald,L.M., FitzHugh,W.M., Fritchman,J.L., Geoghagen,N.S.M., Glodek,A.,

Gnehm,C.L., Hanna,M.C., Hedblom,E., HinkleJr,P.S., Kelley,J.M.,

Moreno-Palanques,R.F., McDonald,L.A., Nguyen,D.T., Pellegrino,S.M.,

Fhillips,C.A., Ryder,S.E., Scott,J.L., Saudek,D.M., Shirley,R.,

Small,K.V., Spriggs,T.A., Utterback,T.R., Weidman,J.F., Li,Y.,

Bednarik,D.P., Cao,L., Cepeda,M.A., Coleman,T.A., Collins,E.-J.,

Dlinke,D., Feng,P., Ferrie,A., Fischer,C., Hastings,G.A., He,W.-W.,

Hu,J.-S., Greene,J.M., Gruber,J., Hudson,P., Kim,A., Kozak,D.L.,

Kunsch,C., Ji,H., Li,H., Meissner,P.S., Olsen,H., Raymond,L., Wei

,Y.-F., Wing,J., Xu,C., Yu,G.-L., Ruben,S.M., Dillon,P.J., Fannon

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Nature 377, 3-17,
96026280
Contact: Venter,
The Institute for
932 Clopper Rd,
Tel: 3018699056
Fax: 3018699423
Email: tdbinfo@th
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For clone availability, additional
information related to this EST, pl
(tdbinfo@tdb.tigr.org)
Seq primer: M13 Primer: M13 Primer
                                                                                                                                                                                                                                                   cDNA Library preparation: Dr. M. Bento Soares, University of Iowa CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa DNA Sequencing by: Dr. M. Bento Soares, University of Iowa Clone Distribution: Clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov.org.com/distribution/llnl at: http://image.llnl at: http://image.ll
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (1997)
Contact: Robert Strausberg, |
Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrat
Mammalia; Eutheria; Primates; Catarrhini; Hominic
1 (bases 1 to 722)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human.
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UI-H-EI1-azb-j-22-0-UI.sl NCI_CGAP.
IMAGE:5846517 3', mRNA sequence.
BQ007008
BQ007008.1 GI:19731908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      :n 100.0%;
Similarity 100.0%;
43; Conservative C
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                                                                     /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:5846517"
/clone_lib="NCI_CGAP_EI1"
/tissue_type="Chondrosarcoma"
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/db_xref="ATCC (inhost):107667"
/db_xref="taxon:9606"
/clone_lib="Human Testis"
/note="Organ: testis"
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 /note="Organ:
                                           /dev_stage="Adult"
                          /lab_host="DH10B
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Li, W.B., Gruber, C., Full-length cDNA lib.
Unpublished (2001)
Contact: Genoscope
Genoscope - Centre N.
BP 191 91006 EVRY centre N.
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Conservative
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TAG_LIB=UI-H-EI1
TAG_TISSUE=chondr
                                                                synthesis was primed with an oligo-dT primer containing a Not I site. Double stranded cDNA was ligated to an EcoR I adaptor, digested with Not I, and cloned directionally into pT7T3-Pac vector. The oligonucleotide used to prime the synthesis of first-strand cDNA contains a library tag sequence that is located between the Not I site and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           with a modified polylinker; Site_1: EcoR I; Site_2: NCI_CGAP_EII is a normalized cDNA library containing following tissue(s): Chondrosarcoma. The library was constructed according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. First strand cDNA
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162 c 164 g
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                                                                                                                                                                                        /tissue_type="placenta"
/note="Vector: pCMVSPORT 6; Site_1: NotI;
was primed with a NotI-oligo(dT) primer.
                                                                                                                                                                                                                                               /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="CS0DI002YE03"
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/tissue_type="placenta"
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Eutheria; Primates;
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Liber, C., Jessee, J. and Polayes, D. CDNA libraries and normalization
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Pred. No.
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  Mismatches
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d. Library was constructed by
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                         Length 1014;
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                                                                                                                                                                                                                              574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: cgapbs-r@mail.nih.gov
This clone is available royalty-free tl
IMAGE Consortium (info@image.llnl.gov)
Insert Length: 1280 Std Error: 0.00
Seq primer: -40UP from Gibco
High quality sequence sto
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AA699697
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NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap
National Cancer Institute, Cancer Genome Ana
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qh81g08.x1 Soares_fetal_liver_spleen_lNFLS_S1 Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                         constructed by Bento Soares and M.Fatima
130 c 135 g 137 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /dev_stage="20 week-post conception fetus"
/lab_host="DH10B (ampicillin resistant)"
/note="Organ: Liver and Spleen; Vector: pT7T3D (Pharmacia)
with a modified polylinker; Site_1: Pac I; Site_2: Eco RI;
This is a subtracted version of the original Soares fetal
liver spleen lNFLS library. 1st strand cDNA was primed
with a Pac I - oligo(dT) primer [5'
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Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'clone_lib="Soares_fetal_liver_spleen_lNFLS_S1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Metazoa;
 Metazoa;
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                                                                 GI:2703844
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92.58;
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   Chordata;
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Pred.
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Mismatches 3
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Catarrhini;
Craniata;
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Vertebrata;
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                                                                                                              linear EST 19-DEC-1
S1 Homo sapiens cDNA
TUMOR NECROSIS FACTOR
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E 1 (bases 1 to 564)

S Hillier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S.,

Krizman,D., Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M., Martin,J., Moore,B., Schellenberg,K., Steptoe,M., Tan,F., Theising,B.,

White,Y., Wylie,T., Waterston,R. and Wilson,R.

WashU-NCI human EST project

Unpublished (1997)

Contact: Wilson RK

Washington University School of Medicine

4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108

Tel: 314 286 1810

Email: est@watson.wustl.edu

This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.

Seq primer: -40m13 fwd. ET from Amersham

High quality sequence stop: 397.
BG232086

Inaf32e06.x1 Soares_NPBMC Homo
mRNA sequence.
BG232086

BG232086.1 GI:12727241

EST.

human.

Homo sapiens
Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;
1 (bases 1 to 561)

NCI-CGAP http://www.ncbi.nlm.n
National Cancer Institute, Cantumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: M. Bento Straushed Str
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      561
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Location/Qualifiers
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Cancer Institute, Cancer Genome Ana
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123 c 138 g 127 t
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/db_xref="taxon:9606"
/clone="tuxon:
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Primates;
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             Bento Soares,
lon: M. Bento
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         Soares,
                                            Ph.D
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Ph.D

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RESULT 7
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AL575811 LTI
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Mammalia; F
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Seq primer: -40UP from
High quality sequence of
                                                                                                                                                                                                                                                             Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
                                                                                                                                                                                                                                                                                       Li, W.B., Gruber, C., Jessee, Full-length cDNA libraries Unpublished (2001)
Contact: Genoscope
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DNA Sequencing by: 1
Clone distribution:
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/organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="CSODIO70YO15"
/clone="LTI_NFL006_PL2"
/tissue_type="placenta"
/note="Vector: pCMVSPORT 6; Site_1: Not1; 1st strand cDNA
was primed with a Not1-oligo(dT) primer. Five prime end
enriched, double-stranded cDNA was digested with Not I and
cloned into the Not I and Eco RV sites of the pCMVSPORT 6
vector. Library was normalized. Library was constructed by
Life Technologies. Contact : Feng Liang Life Technologies,
a division of Invitrogen 9800 Medical Center Drive
Rockville, Maryland 20850, USA Fax : (1) 301 610 8371
Email : fliang@lifetech.com URL :
http://fulllength.invitrogen.com"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Library Arrayed by: The I.M.A.G.E. Consorti
Sequencing by: Washington University Genome
e distribution: NCI-CGAP clone distribution
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    Location/Qualifiers
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Eutheria; Primates;
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Mammalia; Eut
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Proc. Nat
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AQ4597
AQ4597
GSS.
human
                                                                                                                                                                                                                                                                                                                               Email: jwallace@u.washington.edu
Clones are derived from the human BAC library RPCI-11. For BAC
library availability, please contact Pieter de Jong
(pieter@dejong.med.buffalo.edu). Clones may be purchased from
BACPAC Resources (http://bacpac.med.buffalo.edu/ordering_bac.htm)
or from Resear h Genetics (info@resgen.com). BAC end Web Server:
http://www.htsc.washington.edu
Plate: 701 row: K column: 7
                                                                                                                                                                                                                                                                                                                                                                                                                                         Fax:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tel:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Mahairas GG, Wallace JC, High Throughput Sequencing Center University of Washington
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Class: BAC ends
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TGGGGCTTCCAGAGGTCACCTGGGCAGACAGCTTTG 145
             TGGGGCCTCCAGAACTCACTGGGGCCTACAGCTTTG
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nomic clone Plate=701 Col=7 Row=K, DNA se
459761
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              251
                                                                                                                                                                                                                                                                              quality sequence stop: 431.
Location/Qualifiers
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                                                                                                                   /note="Vector: pBACe3.6; Site_1: EcoRI; Site_2: Male blood DNA was isolated from one randomly cland partially digested with a combination of EcoRI Methylase. Size selected DNA was cloned in pBACe3.6 vector at EcoRI sites"

78 c 101 g 116 t
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Eutheria; Primates; Catarrhini;
1 to 431)
G.G., Wallace, J.C., Smith, K., Sw,
, Shaker, R., Furlong, J., Young, J
                                                                                                                                                                                                              /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="Plate=701 Col=7 Row=K"
/clone_lib="RPCI-11 Human Male
                                                                                                                                                                                                   /sex="male"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: est@watson.wustl.edu
High quality sequence stops: 427
Source: IMAGE Consortium, LLNL
This clone is available royalty-free thro
IMAGE Consortium (info@image.llnl.gov) fo
Seq primer: ml3 -40 forward
High quality sequence stop: 427.
Location/Qualifiers
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16
CM2-KT0031-141200-628-c08 K
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BF737938.1 GI:12064614
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N26123
N26123
YX90h08.sl Soares melanocyte 2NbHM Homo sapiens cDNA clone
IMAGE:269055 3' similar to gb|M87890|HUMALCE124 Human carcinoma
cell-derived Alu RNA transcript, (rRNA); gb:X14008_rnal LYSOZYME C
PRECURSOR (HUMAN); contains Alu repetitive element;, mRNA sequence.
N26123
N26123.1 GI:1140471
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The Washu-Merck EST Project
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4444 Forest Park Parkway, Box
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished (1995)
Contact: Wilson RK
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                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/db_xref="GDB:3878697"
/db_xref="taxon:9606"
/clone="IMAGE:269055"
/clone_lib="Soares melano"
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Eutheria;
1 to 594)
                                                                                                                                                                                                                                                                                                                                                                                                                   /tissue_type="melanocyte"
/lab_host="DH10B (ampicil
/note="Vector: pT7T3D (Ph
                                                                                                                                                                                                                                                                                                                                                                                                                                                              'sex="Male"
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Shotgun sequencing of the human transcriptome with ORF expressed sequence tags

Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)

Contact: Simpson A.J.G.

Laboratory of Cancer Genetics

Ludwig Institute for Cancer Research

Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,

Brazil

Tel: +55-11-2704922

Fax: +55-11-2707001

Email: asimpson@ludwig.org.br

This sequence was derived from the FAPESP/LICR Human Cancer Genome

Project. This entry can be seen in the following URL

(http://www.ludwig.org.br/scripts/gethtml2.pl?tl-CM2&t2-CM2-KT0031-
141200-628-c08&t3-2000-12-14&t4-1)

Seq primer: puc 18 forward

High quality sequence start: 4

High quality sequence stop: 77.
      DF855413

BF855413

N RC4-FN0203-121100-011-b01 FN0203 Homo sapiens cDNA, mRNA sequence.

BF855413

BF855413.1 GI:12243157

EST.

human.

SM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

E 1 (bases 1 to 172)

S Dias Neto, E., Garcia Correa, R., Verjovski-Almeida, S., Briones, M.R.,

Nagai, M.A., da Silva, W. Jr., Zago, M.A., Bordin, S., Costa, F.F.,

Goldman, G.H., Carvalho, A.F., Matsukuma, A., Baia, G.S., Simpson, D.H.,

Brunstein, A., deOliveira, P.S., Bucher, P., Jongeneel, C.V., O'Hare

,M.J., Soares, F., Brentani, R.R., Reis, L.F., de Souza, S.J. and

Simpson, A.J.

Shotqun sequencing of the human transcriptome with ORF expressed
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 163)
Dias Neto, E., Garcia Correa, R., Verjovski-Almeida, S., Briones, M.R.,
Nagai, M.A., da Silva, W. Jr., Zago, M.A., Bordin, S., Costa, F.F.,
Goldman, G.H., Carvalho, A.F., Matsukuma, A., Baia, G.S., Simpson, D.H.,
Brunstein, A., deOliveira, P.S., Bucher, P., Jongeneel, C.V., O'Hare
, M.J., Soares, F., Brentani, R.R., Reis, L.F., de Souza, S.J. and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
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/db_xref="taxon:9606"
/clone_lib="KT0031"
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Seq primer: puc 18 forward
High quality sequence start: 65
High quality sequence stop: 172.
Location/Qualifiers
1. .172
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Proc. Nat
20202663
Contact:
cDNA Library preparation: Dr. M. Bento Soares, University of cDNA Library Arrayed by: Dr. M. Bento Soares, University of DNA Sequencing by: Dr. M. Bento Soares, University of Iowa Clone Distribution: Clone distribution information can be obfrom Dr. M. Bento Soares, bento-soares@uiowa.edu
The following repetitive elements were found in this cDNA sequence: 1-103, >(GAAAA)n#Simple_repeat (matched compliment) 104-402, >ALU (matched compliment) 318-427, >ALU (matched compliment) 605-761, >MLT2B2
Seq primer: M13 FORWARD
                                                                                                                                                                                             Unpublished (1997)
Contact: Robert Strausberg, |
Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; verte
Mammalia; Eutheria; Primates; Catarrhini; Hon
1 (bases 1 to 763)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anat
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29; Conservative
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UI-H-EU1-azy-m-09-0-UI.s1 NCI_CG
UI-H-EU1-azy-m-09-0-UI 3', mRNA
BQ445871
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Laboratory of Cancer Genetics
Ludwig Institute for Cancer Ro
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Fax: +55-11-2707001
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/organism="taxon:9606"
/db_xref="taxon:9606"
/clone_lib="FN0203"
/dev_stage="Adult"
/note="Organ: prostate_normal; Vector: pucl8; Site_1: SmaI; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."

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i; Hominidae;
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                                                                                                                       s, University of , University of I ersity of Iowa
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RESULT 13
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AGENCOURT_7558467 NIH_MGC_72
5', mRNA sequence.
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                                                                                                                                und through the I.M.A.G.E. Consortium/LLNL at: tp://image.llnl.gov
ate: LLAM13293 row: b column: 16
                                                                                                                                                                                 DNA Library Preparation: Life Technologies, Inc.
DNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
NA Sequencing by: Agencourt Bioscience Corporation
lone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LYA-No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ø
                                                                                                                                                                                                                                                                                                                   http://mgc.nci.nih.gov/.
Institutes of Health, Mammalian Gene
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TAG_TISSUE-osteoarthritic cartilage
TAG_SEQ-TGATCACGCT"
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1. .763
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/lab_host="DH10B (Li
/note="Organ: Knee;
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/clone_lib="NCI_CGAP_Ct1"
/tissue_type="Osteoarthritic Cartilage"
                               clone="IMAGE: 6046767"
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/db_xref="taxon:9606"
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73.28;
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_type="melanotic
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Homo sapiens cDNA clone IMAGE:6046767
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  melanoma"
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L; Hominidae;
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Mammalia; F
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BM550588
BM550588.1
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AGENCOURT_6585260 NIH_MGC_41
5', mRNA sequence
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Plate: LLCM1980 row: g column: 24
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National Institutes of Health, Mammalian
Unpublished (1999)
                                                    8
                                                                                                     28;
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Tissue Procurement: DCTD/DTP
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                                                                                                                        Similarity
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GGGGGCTTCAGAGCTCACTGGGGCATGCTGGTTTCA 998
                                                GGGGCCTCCAGAACTCACTGGGGCCTACAGCTTTGA 43
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                                                                                                    Conservative
                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:5471663"
/clone="IMAGE:5471663"
/clone_lib="NIH_MGC_41"
/tissue_type="amelanotic melanoma, cell line"
/tissue_type="amelanotic melanoma, cell line"
/lab_host="DH10B (phage-resistant)"
/note="Organ: skin; Vector: pOTB7; Site_1: XhoI; Site_2:
/note="Organ: poTB7; Site_1: XhoI; Site_2: poTB7; Site_2: po
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lity sequence stop: 770.
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Superscript II RT (Life Technologies). Note:
NIH_MGC Library. "
285 c 272 g 202 t 3 others
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Mismatches 8
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Catarrhini; Hominidae;
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es 8;
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AA436782.1
EST.
human.
Homo sapien
Eukaryota;
Mammalia; E
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Hillier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S., Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M., Martin,J., Moore,B., Schellenberg,K., Steptoe,M., Tan,F., Theising,B., White,Y., Wylie,T., Waterston,R. and Wilson,R.
WashU-Merck EST Project 1997
Unpublished (1997)
Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL
IMAGE Consortium (info@image.llnl.gov) for further
Seq primer: -28m13 rev2 ET from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Un
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                                                                                                                                   Similarity
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malia; Eutheria; Primates;
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Location/Qualifiers
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/db_xref="taxon:9606"
/clone="IMAGE:759044"
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PCT-US95-12987-3
PCT-US95-12987-5
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US-09-313-932-213
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| 44                                     | 43           | 42           | 41           | 40            | 39             | 38             | 37            | 36            | 3<br>5         | 34             | S<br>S        | 32            | 31          | 30            | 29            | 28            |
| 19.4<br>19.4                           | 9.           | 9            | 9.           | 9.            | 9.             | 9.             | 9.            | 9.            | 9.             | 9              | 9.            | 9.            | 9.          | N             | 20            |               |
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| US-09-653-839-1<br>US-09-513-783A-175  | -09-653-839- | -09-304-121- | -08-178-477B | -09-653-839-5 | -09-653-839-   | -09-648-797-5  | -08-935-105A- | -08-940-035A- | -08-940-086A-  | -08-486-273A-  | -08-231-193A- | -09-632-098-3 | -09-632-098 | -09-313-932-4 | -09-313-932-3 | -09-313-932-3 |
| Sequence 1, Appli<br>Sequence 175, App | nce 3,       | ce 1, Ap     | ce 31, Ap    | equence 5, Ap | equence 7, App | equence 57, Ap | ce 57, Ap     | 7, Ap         | equence 57, Ap | equence 57, Ap | 7             | •             |             | ence 468, A   | uence 361, A  | S             |

## ALIGNMENTS

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RESULT 1
US-08-880-342-3
; Sequence 36,
; Patent No. 62
; GENERAL INFO
INFORMATION
SEQUENCE C
LENGTH:
TYPE: r
STRANDER
TOPOLOGY
MOLECULE T
HYPOTHETIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSE: Dehlinger & Associates
STREET: 350 Cambridge Avenue, Suite 2
CITY: Palo Alto
STATE: CA
COUNTRY: USA
ZIP: 94306
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Vers
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/880,342
FILING DATE: 23-JUN-1997
CLASSIFICATION DATA:
APPLICATION NUMBER: PCT/IB95/00996
FILING DATE: 13-NOV-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/365,486
FILING DATE: 23-DEC-1994
ATTORNEY/AGENT INFORMATION:
NAME: Sholtz, Charles K.
REGISTRATION NUMBER: 38,615
                                                                                                                   NAME: Sholtz, Charles K.
REGISTRATION NUMBER: 38,615
REFERENCE/DOCKET NUMBER: 8255
REFERENCE/DOCKET NUMBER: 8255
REFERENCE/DOCKET NUMBER: 8255
RELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 324-0880
TELEPHONE: (415) 324-0960
INFORMATION FOR SEQ ID NO: 36:
SEQUENCE CHARACTERISTICS:
LENGTH: 1643 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
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NT: Bishopric, Nanette ...
NT: Murphy, Brian
NT: Laderoute, Keith R.
NT: Green, Christopher J.
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                                              TYPE:
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; LOCATION:
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GENERAL INFOkra...
APPLICANT: Baker, brownicant: Bennett, C. Frank
PULICANT: Butler, Madeline M.
Than, William R.
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Matches 43
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TITLE OF INVENTION:
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APPLICANT: Rosen,
APPLICANT: Kao, Pe
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                                                                                         SEQ ID NO
                                                                                                    FILE REFERENCE: ISPH-0322
CURRENT APPLICATION NUMBER: US/09/166,186A
CURRENT FILING DATE: 1998-10-05
NUMBER OF SEQ ID NOS: 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/505,250A CURRENT FILING DATE: 2000-02-15 NUMBER OF SEQ ID NOS: 4 SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 1643
TYPE: DNA
ORGANISM: H.
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TYPE: DNA
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APPLICANT:
                                                                                                                                                 APPLICANT: Shanahan, William R.
TITLE OF INVENTION: ANTISENSE OLIGONUCLEOTIDE
TITLE OF INVENTION: EXPRESSION
FILE REFERENCE: ISPH-0356
                                                                                                                   CURRENT APPLICATION NUMBER: US/09/313,932A CURRENT FILING DATE: 1999-05-18 NUMBER OF SEQ ID NOS: 501
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TYPE: DNA
ORGANISM:
FEATURE:
NAME/KEY:
LOCATION:
FEATURE:
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LOCATION:
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TIME: 13
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DATE: 1985-09-11

DATABASE ACCESSION NUMBER: X02910 Genbank

DATABASE ENTRY DATE: 1997-02-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION: (2171)..(3381) PUBLICATION INFORMATION:
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                                                                                              LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCATION:
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Naylor, S.L.
Sakaguchi, A.Y.
Smith, D.
Jarrett-Nedwin,
Pennica, D.
Goeddel, D.V.
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(796.
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Bennett, C. Frank
Butler, Madeline M.
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imilarity 100.0%;
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an lymphotoxin and tumor necrosis factor genes: structure,
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Pred. No. 1.4e-08;
Mismatches 0;
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RESULT 5
US-09-109-663-34
; Sequence 34, Application US/09109663
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Best Local
Matches 4
                                                                                                                                      GENERAL INFORMATION:
APPLICANT: Tu, Guang-Chou
APPLICANT: Israel, Yedy
TITLE OF INVENTION: AN IMPROVED METHOD FOR DESIGN AND SELECTION OF
TITLE OF INVENTION: EFFICACIOUS ANTISENSE OLIGONUCLEOTIDES
FILE REFERENCE: 9855-3U1
CURRENT APPLICATION NUMBER: US/09/109,663
CURRENT FILING DATE: 1998-07-03
EARLIER APPLICATION NUMBER: 60/051,705
EARLIER FILING DATE: 1997-07-03
                                                                                                             SOFTWARE:
Query Match
Best Local Similarity
                                    FEATURE:
OTHER INFOI
-09-109-663-
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ISSUE: 17
PAGES: 6361-6373
DATE: 1985-09-11
DATABASE ACCESSION NUI
DATABASE ENTRY DATE: 1
                                                                                                                                   NUMBER OF SEQ 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PUBLICATION: (2171)..(3381)
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AUTHORS:
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                                                                      TYPE: DNA
ORGANISM: Homo
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                                                 INFORMATION:
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Human lymphotoxin and tumor necrosis structure, homology and chromosomal compositions.
L: Nucleic Acids Res.
                                                                                                 3634
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: Naylor, S.L.
: Sakaguchi, A.Y.
: Smith, D.
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1: 1997-02-17
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Pred. No. 1.4e-08;
Mismatches 0;
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PCT-US95-12987
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Best Local
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                    NUMBER OF INVENTION.
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: ROY D. MEREDITH
ADDRESSEE: P.O. BOX 2000, 126 E
                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
NAME: MEREDITH, ROY D.
REGISTRATION NUMBER: 30,777
REFERENCE/DOCKET NUMBER: 1926
TELECOMMUNICATION INFORMATION:
TELEPHONE: (908) 594-4678
TELEFAX: (908) 594-4720
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
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SEQUENCE (
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APPLICANT:
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        ADDRESSEE: ROY D. STREET: P.O. BOX 2 CITY: RAHWAY STATE: NEW JERSEY
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CITY: RA
STATE: N
COUNTRY:
ZIP: 070
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M TYPE: Floppy disk
TER: IBM PC compatible
TING SYSTEM: PC-DOS/MS-DOS
ARE: PatentIn Release #1.0, V
APPLICATION DATA:
CATION NUMBER: PCT/US95/12987
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7; Conserv
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: P.O. BOX 2000, 126 E.
RAHWAY
NEW JERSEY
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                                                                        SARDANA, V.
SE VELOSKI, C.
INVENTION: STABLE RECOMBINANT HCMV PROTEASE
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VELOSKI, C.

INVENTION: STABLE RECOMBINANT HCMV PROTEASE

SEQUENCES: 9
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USA
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Pred. No.
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; ANTI-SENSE:
PCT-US95-12987-3
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PCT-US95-12987-5
                                     ATTORNEY/AGENT INFORMATION:
NAME: MEREDITH, ROY D.
REGISTRATION NUMBER: 30,777
REFERENCE/DOCKET NUMBER: 1926
TELECOMMUNICATION INFORMATION:
TELEPHONE: (908) 594-4678
TELEFAX: (908) 594-4720
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
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Best Local
Matches 2
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REGISTRATION NUMBER: 30,777
REFERENCE/DOCKET NUMBER: 1926
TELECOMMUNICATION INFORMATION:
TELEPHONE: (908) 594-4678
TELEPHONE: (908) 594-4720
INFORMATION FOR SEQ ID NO: 3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, VO
CURRENT APPLICATION DATA:
---TTON NUMBER: PCT/US95/12987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                equence 5, Application GENERAL INFORMATION:
APPLICANT: LAFEMINA,
                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: VELOSKI, C.
TITLE OF INVENTION: STAI
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: ROY D. MER
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CLASSIFICATION:
ATTORNEY/AGENT INF
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MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatil

OPERATING SYSTEM: PC-DOS,
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LENGTH: 771 base pairs
                                                                                                                                                                       SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/129
FILING DATE:
CLASSIFICATION:
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STATE: NEW TO
              TYPE:
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STRANDEDNESS: doi
TOPOLOGY: linear
TYPE: nucleic STRANDEDNESS:
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ZIP: 07065-0907
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NUMBER: 19262
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RESULT 10
US-08-470-298B-
; Sequence 1, A
; Patent No. 58
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; ANTI-SENSE
PCT-US95-12987-
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                                                                                                                    Query Match
Best Local S
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Best Local
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SEQUENCE C
LENGTH:
TYPE: n
STRANDED
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APPLICATION NUMBER: US/08/409,731A
FILING DATE: 24-MAR-1995
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMARE: Berry
                                                                                                                                                      08-409-
                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
NAME: Benson, Robert H
REGISTRATION NUMBER: 30,446
REFERENCE/DOCKET NUMBER: PF17
TELECOMMUNICATION INFORMATION:
TELEPHONE: 301-309-8504
TELEFAX: 301-309-8512
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
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FEATURE:
NAME/KEY:
CATION:
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MEDIUM
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APPLICANT: Rosen, Craig A.
TITLE OF INVENTION: CYTOSTATIN I
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
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TYPE: DNA
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9410 KEY WEST AVENUE
ROCKVILLE
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Application US/08470298B
844081
                                                                                                          imilarity 78.;
Conservative
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nucleic acid
DNESS: single
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658758
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                                                                                                                    Score 20.8;
Pred. No. 11;
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US-09-023-073A-1
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INFORMATION FOR SEQ ID NO: 3
SEQUENCE CHARACTERISTICS:
SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patent No. 5977309
GENERAL INFORMATION:
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CURRENT APPLICATION NUMBER: US/00

CLASSIFTC

Floppy disk

IP: 20850
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: SYSTEM: PC-DOS/MS-DOS
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NAME: BROOKES, ALLAN A.
REGISTRATION NUMBER: 36,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
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CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity 78.25; Conservative
                                                                                                                                                                                                                                                                                           ROCKVILLE
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YU, GUO-LIANG
POSEN, CRAIG A.
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Yu, Guo-Liang
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06-JUN-1995
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36,373
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N: Cytostatin
ES: 11
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78.18;
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; LOCATION:
US-09-023-073A-1
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ATTORNEY/AGENT INFORMATION:

NAME: Wales, Michele M.

REGISTRATION NUMBER: P-43,975

REFERENCE/DOCKET NUMBER: PF175D2

TELECOMMUNICATION INFORMATION:

TELEPHONE: 301-610-5772

TELEFAX: 301-309-8439

INFORMATION FOR SEQ ID NO: 1:

SEQUENCE CHARACTERISTICS:
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Patent No.
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Best I
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TELEPHONE: 301-610-5772
TELEFAX: 301-309-8439
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: HUMAN GENOME SCIENCES,
STREET: 9410 KEY WEST AVENUE
CITY: ROCKVILLE
                                                                                                                                                                                              CURRENT APPLICATION DAPPLICATION NUMBER:
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APPLICATION NUMBER:
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TITLE OF I
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CITY: 1
STATE:
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                                                                                                                                                                                         MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
JRRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/361,737
                                                                                                                                                                                                                                                                                             ZIP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE:
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                                                                                                                                                                  CLASSIFICATION:
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NAME: Wales, Michele M.
REGISTRATION NUMBER: P-43,975
REFERENCE/DOCKET NUMBER: PF175D2
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Similarity 78.1%;
25; Conservative
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INVENTION: Cytostatin
SEQUENCES: 11
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Gentz, Reiner
Yu, Guo-Liang
Craig A
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US-08-820-825-1
                                                                                         US-08-820-
                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:

NAME: BROOKES, ANDERS A.

REGISTRATION NUMBER: 36,373

REFERENCE/DOCKET NUMBER: PF22

TELECOMMUNICATION INFORMATION:

TELEPHONE: (301) 309-8504

TELEFAX: (301) 309-8512

INFORMATION FOR SEQ ID NO: 1:
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Best Local
Matches 2
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Matches
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                                                                Query
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APPLICANT: YU, GUO-LIANG
APPLICANT: GENTZ, REINER L.
APPLICANT: DILLON, PATRICK
TITLE OF INVENTION: CYTOSTATIN III
NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
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MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0,

CURRENT APPLICATION DATA:
                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/08/820,825
FILING DATE: 19-MAR-1997
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                        FEATURE
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CITY: I
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LENGTH: 944 bacc
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US-09-307-817:
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                                                                                                                               Sequence 1, Patent No.
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Patent No.
GENERAL II
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INFORMATION
SEQUENCE C
LENGTH:
TYPE: n
STRANDED
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ATTORNEY/AGENT INFORMATION:
NAME: BROOKES, ANDERS A.
REGISTRATION NUMBER: 36,373
REFERENCE/DOCKET NUMBER: PF22
TELECOMMUNICATION INFORMATION:
TELEPHONE: (301) 309-8504
TELEFAX: (301) 309-8512
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                   GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: NI, JIAN
APPLICANT: YU, GUO-LIANG
APPLICANT: GENTZ, REINER L.
APPLICANT: DILLON, PATRICK
TITLE OF INVENTION: CYTOSTATI
NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
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COMPUTER
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                                  NUMBER OF
CORRESPOND
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APPLICATION NUMBER: US/09/307,817
FILING DATE:
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PRIOR APPLICATION DATA:
APPLICATION NUMBER:
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CITY:
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COMPUTER: IBM PC
OPERATING SYSTEM:
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5. 6413726
INFORMATION:
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NT: YU, GUO-LIANG
NT: GENTZ, REINER L.
NT: DILLON, PATRICK
F INVENTION: CYTOSTATIN III
                                                                                                                                                                                                     TYPE:
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DNESS:
EE: HUMAN GENOME SCIENCES,
9410 KEY WEST AVENUE
ROCKVILLE
                                  SEQUENCES: 1
DENCE ADDRESS:
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cleic acid
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Search completed: July Job time: 21.7687 secs
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ZIP: 20850
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Ver
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/734,036
FILING DATE:
CLASSIFICATION DATA:
APPLICATION NUMBER: 09/307,817
FILING DATE:
APPLICATION NUMBER: 09/307,817
FILING DATE:
APPLICATION NUMBER: 36,373
REFERENCE/AGENT INFORMATION:
NAME: BROOKES, ANDERS A.
REGISTRATION NUMBER: 9F222
TELECOMMUNICATION INFORMATION:
TELEPHONE: (301) 309-8504
TELEFAX: (301) 309-8512
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 944 base pairs
TYPE: nucleic acid
TTPANNDEDNESS: single
                                                                                                                          Query Match . 48.48;
Best Local Similarity 78.18;
Matches 25; Conservative
                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                    STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
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Pred. No. 11;
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1: /cgn2_6/ptodata/1/pubpna/US07_PUBCOMB.seq:*

2: /cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*

3: /cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*

4: /cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*

5: /cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*

6: /cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*

7: /cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*

9: /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*

10: /cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:*

11: /cgn2_6/ptodata/1/pubpna/US10_NEW_PUB.seq:*

12: /cgn2_6/ptodata/1/pubpna/US10_PUBCOMB.seq:*

13: /cgn2_6/ptodata/1/pubpna/US10_PUBCOMB.seq:*

14: /cgn2_6/ptodata/1/pubpna/US60_NEW_PUB.seq:*
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Sequence 6, Application US/09801371A; Patent No. US20020155569A1; GENERAL INFORMATION:
APPLICANT: Kaempfer, Raymond; APPLICANT: Osman, Farhat; APPLICANT: Jarrous, Nayef; APPLICANT: Ben-Ason<sup>14</sup>

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Query Match Best Local S Matches 43

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Score 43; DB 9; Pred: No. 2.4e-08; Mismatches 0;

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| n US/09801<br>69A1<br>Raymond<br>Rayef<br>1, Yitzhak<br>EGULATION<br>MANIPULATI<br>4-PCT-USA-<br>UMBER: US/<br>2001-03-0<br>12<br>Windows V                                    |            | 10 90 1100 90 10 99  |
| /09801371A  ond  ftzhak ATION OF GENE EXPRESSION THROUGH PULATION OF MRNA SPLICING AND IT T-USA-A 066031.0147 R: US/09/801,371A 1-03-07 PCT WO 00/14255 9-06  dows Version 4.0 | ALIGNMENTS | US-09-148-545-72 US-09-981-876-126 US-09-981-876-126 US-09-925-300-779 US-09-764-891-5580 US-10-274-968-3 US-10-214-932-97 US-09-918-995-5224 US-09-918-995-15882 US-09-933-381-551 US-09-933-381-551 US-09-931-436A-1 US-10-153-740-1 US-10-032-366-2 US-10-032-366-2 US-10-098-841-118 US-10-29-124-3 US-09-729-920-3 US-09-739-124-3 US-09-729-935-438 US-09-878-178-438 US-09-878-178-438 US-09-864-761-5346   |
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                                                                                                                                    Patent No. US200201555
GENERAL INFORMATION:
APPLICANT: Kaempfer,
APPLICANT: Osman, Fa
APPLICANT: Jarrous,
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APPLICANT: Kaempfer,
APPLICANT: Osman, F
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Best Local S
Matches 34
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SOFTWARE: FastSEQ for Windows
SEQ ID NO 6
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APPLICANT: Ben-Asouli, Yitzhak
TITLE OF INVENTION: REGULATION OF GENE EXPRESSION THROUGH
TITLE OF INVENTION: MANIPULATION OF MRNA SPLICING AND ITS USES
FILE REFERENCE: A34084-PCT-USA-A 066031.0147
CURRENT APPLICATION NUMBER: US/09/801,371A
CURRENT FILING DATE: 2001-03-07
PRIOR APPLICATION NUMBER: PCT WO 00/14255
PRIOR FILING DATE: 1999-09-06
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 4.0
CURRENT APPLICATION NUMBER: US/09/801,371A CURRENT FILING DATE: 2001-03-07 PRIOR APPLICATION NUMBER: PCT WO 00/14255 PRIOR FILING DATE: 1999-09-06
                                                               APPLICANT: Jarrous, Nayef
APPLICANT: Ben-Asouli, Yitzhak
TITLE OF INVENTION: REGULATION OF GENE EXPRESSION THROUGH
TITLE OF INVENTION: MANIPULATION OF MRNA SPLICING AND IT:
FILE REFERENCE: A34084-PCT-USA-A 066031.0147
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TITLE OF INVENTION: MANIPULATION OF MRNA SPLICING AND ITS
FILE REFERENCE: A34084-PCT-USA-A 066031.0147
CURRENT APPLICATION NUMBER: US/09/801,371A
CURRENT FILING DATE: 2001-03-07
PRIOR APPLICATION NUMBER: PCT WO 00/14255
PRIOR FILING DATE: 1999-09-06
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ORGANISM: Homo:
09-801-371A-8
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ORGANISM: Homo
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US20020155569A1
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UCAAACUGGGGCCUCCAGAACUCACUGGGGCCUACAGCUUUGA 47
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Osman, Farhat
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; TYPE: RNA
; ORGANISM: HC
US-09-801-371A-7
; TYPE: DNA
; ORGANISM: Ho
US-09-801-371A-5
                                                                  APPLICANT: Jarrous, Nayef

APPLICANT: Ben-Asouli, Yitzhak

TITLE OF INVENTION: REGULATION OF GENE EXPRESSION THROUGH

TITLE OF INVENTION: MANIPULATION OF MRNA SPLICING AND ITS US

FILE REFERENCE: A34084-PCT-USA-A 066031.0147

CURRENT APPLICATION NUMBER: US/09/801,371A

CURRENT FILING DATE: 2001-03-07

PRIOR APPLICATION NUMBER: PCT WO 00/14255

PRIOR FILING DATE: 1999-09-06

NUMBER OF SEQ ID NOS: 12

SOFTWARE: FastSEQ for Windows Version 4.0
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US-09-801-371A
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SOFTWARE:
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APPLICANT: Ben-Asouli, Yitzhak
TITLE OF INVENTION: REGULATION OF GENE EXPRESSION THROUGH
TITLE OF INVENTION: MANIPULATION OF MRNA SPLICING AND ITS USES
FILE REFERENCE: A34084-PCT-USA-A 066031.0147
CURRENT APPLICATION NUMBER: US/09/801,371A
CURRENT FILING DATE: 2001-03-07
PRIOR APPLICATION NUMBER: PCT WO 00/14255
PRIOR FILING DATE: 1999-09-06
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 4.0
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Pred. No. 2.4e-08;
Mismatches 0;
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APPLICANT: Teitelbaum, Steven

TITLE OF INVENTION: RANKL MIMICS AND USES THE REFERENCE: 60019620-0202

CURRENT APPLICATION NUMBER

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US-10-218-547-
            DATABASE ACCESSION NUMBER: NCBI/X DATABASE ENTRY DATE: 1995-03-21 RELEVANT RESIDUES: (1)..(1643) PUBLICATION INFORMATION: DATABASE ACCESSION NUMBER: NCBI/BDATABASE ENTRY DATE: 2002-05-01 RELEVANT RESIDUES: (1)..(1643) PUBLICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                             Sequence 4, Application US/10272411 Publication No. US20030100068A1 GENERAL INFORMATION:
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/10/27 CURRENT FILING DATE: 2002-10-15 PRIOR APPLICATION NUMBER: 60/329,393 PRIOR FILING DATE: 2001-10-15 NUMBER OF SEQ ID NOS: 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT FILING DATE: 2002-08-15
PRIOR APPLICATION NUMBER: 60/312,542
PRIOR FILING DATE: 2001-08-16
PRIOR APPLICATION NUMBER: 60/330,761
PRIOR FILING DATE: 2001-10-30
NUMBER OF SEQ ID NOS: 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: CURRENT FILING DATE: 2002-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Human Genome Sciences, Inc.
TITLE OF INVENTION: Methods And Compositions
TITLE OF INVENTION: Human Endokine Alpha
FILE REFERENCE: PF561
                                                                                                                                   TYPE: DNA
ORGANISM: Homo sapiens
PUBLICATION INFORMATION:
                                                                                                                                                                                                             SOFTWARE:
                                                                                                                                                                                LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: human
.0-218-547-3
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 ACCESSION NUMBER:
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llarity 100.0%;
Conservative
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US-10-272-328
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US-09-824-322
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                                             NUMBER OF S
SEQ ID NO 1
LENGTH: 36
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PRIOR
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                                                                                                                                                       APPLICANT: Bennett, C. Frank
APPLICANT: Butler, Madeline M.
APPLICANT: Shanahan, William R.
TITLE OF INVENTION: ANTISENSE OLIGONUCLEOTIDE MODULATION OF TUMOR NECROSIS FACTOR-
TITLE OF INVENTION: ALPHA) EXPRESSION
FILE REFERENCE: ISPH-0501
CURRENT APPLICATION NUMBER: US/09/824,322B
CURRENT FILING DATE: 2001-04-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Ross, F. Patrick
APPLICANT: Teitelbaum, Steven
TITLE OF INVENTION: RANKL MIMICS AND USES THEREOF
FILE REFERENCE: 60019620-0206
CURRENT APPLICATION NUMBER: US/10/272,328A
CURRENT FILING DATE: 2003-01-24
PRIOR APPLICATION NUMBER: 60/329,393
PRIOR FILING DATE: 2001-10-15
NUMBER OF SEQ ID NOS: 51
                                                                                                                             PRIOR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PUBLICATION
TYPE: DNA ORGANISM: FEATURE:
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DATABASE
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RELEVANT
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                                                                      XENT FILING DATE: 2001-04-02

OR APPLICATION NUMBER: US 09/313,932

OR FILING DATE: 1999-05-18

OR APPLICATION NUMBER: US 09/166,186

OR FILING DATE: 1998-10-05

OR SEQ ID NOS: 503
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RESIDUES: (1)..(1643)
ON INFORMATION:
CACCESSION NUMBER: NCBI/ X
ENTRY DATE: 2002-08-01
RESIDUES: (1)..(1643)
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3; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
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No. US20030109444A1
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                 Homo
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llarity 100.0%;
Conservative (
              sapiens
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Pred. No. 2.4e-08;
Mismatches 0;
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Pred. No. 2.4e-08;
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                                                                                                                                                                                                                                        Sequence 34, Application US/09932300 Publication No. US20030032788A1 GENERAL INFORMATION:
                                                                                                                                        APPLICANT: ISRAEL, Yedy
TITLE OF INVENTION: METHODS OF INHIBITING
FILE REFERENCE: 9855-3U2
CURRENT APPLICATION NUMBER: US/09/932,300
CURRENT FILING DATE: 2001-08-20
PRIOR APPLICATION NUMBER: US 60/051,705
PRIOR FILING DATE: 1997-07-03
                                                                                                                                                                                                                                                                                                                                                                                                            ISSUE: 17
PAGES: 6361-6373
DATE: 1985-09-11
DATABASE ACCESSION NUI
DATABASE ENTRY DATE:
                                                                                                          PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1998-0 NUMBER OF SEQ ID NOS: 111
                                            09-932-300-34
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                                                       ORGANISM: Homo
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: Human lymphotoxin and tumor n

: chromosomal localization

AL: Nucleic Acids Res.
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Naylor, S.L.
Sakaguchi, A.Y.
Smith, D.
Jarrett-Nedwin,
Similarity
43; Conserv
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Goeddel,
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INFORMATION:
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larity 100.0%;
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AEL, Yedy
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red. No. 2.4 Mismatches
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red. No. 2.4e-08;
Mismatches 0;
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          2.4e-08;
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                      3634;
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Gaps
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GENERAL

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APPLICANT:
APPLICANT:
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APPLICANT:

Mannion, January

Jane

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Gaiger, Alexander Algate, Paul A.

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US-10-040-862-6
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REFILING DATE: 2000-03-01
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REFILING DATE: 2000-04-27
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REFILING DATE: 2000-05-04
REFILING DATE: 2000-05-22
REPPLICATION NUMBER: 60/202,903
REFILING DATE: 2000-07-14
REPPLICATION NUMBER: 60/222,903
REFILING DATE: 2000-08-03
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REFILING DATE: 2000-08-04
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E OF INVENTION: HEMATOLOGICAL MALIGNANCIES
REFERENCE: 2077.001200
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APPLICATION NUMBER: 60/223,378
FILING DATE: 2000-08-07
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                                     APPLICANT: Jarrous, Nayef
APPLICANT: Ben-Asouli, Yitzhak
TITLE OF INVENTION: REGULATION OF GENE EXPRESSION THROUGH
TITLE OF INVENTION: MANIPULATION OF MRNA SPLICING AND ITS
FILE REFERENCE: A34084-PCT-USA-A 066031.0147
CURRENT APPLICATION NUMBER: US/09/801,371A
CURRENT FILING DATE: 2001-03-07
PRIOR APPLICATION NUMBER: PCT WO 00/14255
PRIOR FILING DATE: 1999-09-06
NUMBER OF SEQ ID NOS: 12
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CURRENT APPLICATION NUMBER: US/10
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                         SOFTWARE:
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LENGTH:
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OR APPLICATION NUMBER: US 60/223,378

OR FILING DATE: 2000-08-07

OR APPLICATION NUMBER: US 09/796,692

OR FILING DATE: 2001-03-01

SER OF SEQ ID NOS: 10467

WARE: FastSEQ for Windows Version 3.0
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DR APPLICATION NUMBER: US 60/200,779

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DR APPLICATION NUMBER: US 60/200,999

DR FILING DATE: 2000-05-01

DR APPLICATION NUMBER: US 60/202,084

DR APPLICATION NUMBER: US 60/206,201

DR FILING DATE: 2000-05-22

DR APPLICATION NUMBER: US 60/218,950

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DR APPLICATION NUMBER: US 60/223,416

DR APPLICATION NUMBER: US 60/223,416
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; ORGANISM: Homo sapiens
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US-09-535-459-1127
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Sequence 1127, Application US/09535459
Publication No. US20030040615A1
GENERAL INFORMATION:
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Delegeane, Angelo M.
Stuart, Susan G.
Stuve, Laura L.
Mullahy, Sara J.
Naughton, Rebecca E.
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